

SKIN DIVER

MAGAZINE

50c
October
1961
ACME



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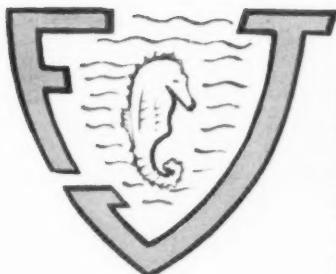
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U. S. Team Financial Support Still Needed

The Underwater Society's team placed third in the world competition in Spain! Did you help it get there? The individuals who came forward with their support can feel proud that this was truly a team representative of, and supported by, the divers.

The individual support, though good, has been less than expected. It was our belief that there were at least 10,000 divers who cared enough about the sport to lend their support. It is still our belief that this many, or more, have intended to join us in this campaign.

This fund drive is not yet complete, however. Though the team scored well in Spain, all of the bills are not paid! Now is the time for all you divers with good intentions to follow through. Before the team returns, DO IT! Get your Decal now, and display it as a badge of honor.

The decals can be purchased from any of the Underwater Society of America Councils, or by sending \$1.00 to: U. S. TEAM, c/o Skin Diver Magazine, Box 111, Lynwood Calif.

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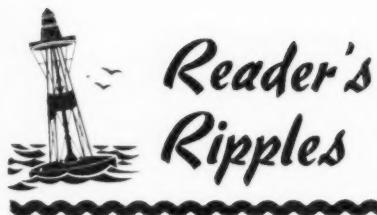
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Reader's Ripples

... How about a state by state listing of the best diving areas?

F. G. Hempel
1224—18th St. N. W.
Cedar Rapids, Iowa

There are so many different diving areas in each of the states that such a list would be almost impossible to compile. However, we do look over with great interest any articles that come into our office on excellent but little known diving areas in any state. Many times such an area is within range of divers who knew nothing about it before. Any readers who know of such an area can rest assured that their story will be given careful consideration.

... I read an article where it stated that "sharks aren't really dangerous to skin divers if you know your business." I have a friend who I thought knew his business but has the stitches to prove different. Do you agree with the statement?

Eddie McComb
3835 Clairmont Ave.
Birmingham, Alabama

Sharks are very rarely **REALLY** dangerous, though it pays to know the shark's business primarily. They are unpredictable creatures, better left alone.



... Here's a check to extend my sub for another year. It's worth four dollars just to read Driftwood each month. My daughter took the photo on the Beach at Westport. She calls it "The Old Man of the Sea."

Jim Larsen
Box 86
Westport, Calif.

... We would like to know which would keep you warmer while skin diving, a dry suit or a wet suit?

Mark Lipis
Jeff Null
Camp Cobossee
Winthrop, Maine

A dry suit, however . . .

... How about an article on diving around sunken warships or military vessels? This is an untapped field as far as I can find out. However, I was wondering if there would be any legal complications. The skin diving club in my home town is trying to locate a Japanese submarine reported sunken off the Oregon coast . . . the same in Florida. I was wondering if your readers could shed a little light on this.

A3C Douglas K. Howard
AF 19657773
20th MMS
Barksdale AFB, LA.

Assuming you are speaking of relatively modern warships, it would depend on the area, nationality and circumstances of sinking. We'll wait to hear from other readers.

... I have a punctured ear drum and my ear specialist tells me I can't dive without a corrective operation. I feel like a piece of driftwood on the beach after encouraging friends to dive.

Mrs. Geri Bookstein
336 N. Lotus
Chicago 44, Illinois

Start counting backwards from one hundred and when you wake up . . . Seriously, if an ear specialist has definitely warned you against diving, we can only advise staying out of the water until the problem has been corrected.

... I would like to call to your attention that divers should adopt the No Waving Rule. The No Waving Rule is very simple and very effective. In context it says: That no diver on the surface of the water shall raise his arm(s) above his head unless he requires immediate assistance. Now, why should we as divers adopt the No Waving Rule? First, to wave when you are in trouble is the most natural thing to do, requiring little or no thought on the part of the distressed diver. Secondly, other than a blast of dynamite, flare, or smoke bomb, it is the easiest signal to see—even from a distance. Third, it will be the easiest to explain, needing no illustrations, or pictures. Fourth, it will be the easiest to promote not only among the skin diving fraternity, but also among the boatmen or men on the beach who might be in a position to offer assistance. And last, it requires no special devices—you always have your signalling equipment with you. I hope that the No Waving Rule will be highly effective among divers.

Wayne Love
Rt. 1, Box 288
N. Little Rock, Ark.

... A friend and I are having an argument as to whether Lloyd Bridges was a frogman during the Second World War . . . I say yes. Also, what was the date of the "Sea Hunt" article you recently ran.

H. T. Van Der Zyde
199 Clinton Street
Woodbridge, New Jersey

As we understand it, Mr. Bridges was not a frogman, although he is an expert diver both on and off the TV screen. The "Sea Hunt" story ran in March, 1961. Incidentally, after several very successful years, "Sea Hunt" is no longer in production. Fans not satisfied with this arrangement can tell Lloyd Bridges and Producer Ivan Tors by writing in care of ZIV-United Artists TV, 7324 Santa Monica Blvd., Los Angeles, California.

... Starting this fall, I will be attending Springfield College, Springfield, Massachusetts, and would like to hear from any divers in that area.

Dan Davies
310 Kenyon Ave.
Elyria, Ohio

(Continued on Page 6)



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cover



Togetherness in diving is the theme of October's cover. From top to bottom, Timothy Hallinan (age 6), Ginger Stoltz, and Buddy Gaines cavort at Florida's famed Cypress Gardens. Dennis Hallinan took the shot with a 4x5 Linhof.

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OLNEY'S OVERSEAS OBSERVATIONS

Points of interest noted in foreign diving and fishing publications by Ross R. Olney, Associate Editor.

Skin diving police wearing fins and packing harpoons instead of pistols broke up a nude sunbathing group at a secluded Riviera cove near Nice, France, recently. Like attacking sea lions, the cops waddled out of the sea and arrested four men and two women before any of the nudists had time to don a pair of sun glasses. The sunbathers were all "naked as worms," police said. Officers said they had been trying for weeks to catch the sunbathers, but each time they raised the cove by land the sunbathers heard them coming and had time to slip into more conventional beach attire or dive into the surf and the role of innocent swimmers. (Associated Press)

An interesting book with the intriguing title "Killers of Eden" is soon to come from Australia. The book, authored by Tom Mead, tells of herds of killer whales off New South Wales which helped commercial whalers trap and kill their prey. The killers would form packs and seem to steer the whales into the harpoons of the hunters. For this the hunters would allow the killers to take the dead whales beneath the surface to dine on tongues and lips, their favorite food. Later, perhaps the next day, the killers would release the carcass to float back to the hunters who would retrieve it for its blubber. (E. Riches-Sydney Daily Telegraph)

Six years ago Bermudian skin diver Teddy Tucker turned his hobby into a real business. He found an emerald studded gold cross in the wreckage of an old Spanish ship just off Bermuda. The cross has been valued at more than \$75,000 and in the six years since, Tucker's total treasure finds amount to an estimated \$200,000. (Miami, Florida, Herald)

Fifteen wooden vases carved by Greek artists over 2,500 years ago have been found remarkably well preserved in mud near Vravron, the Greek Archaeological Society says. (New York Post)

Some of the boys were on the jetty at Iona in Scotland, waiting to embark and were carrying their regulators around their shoulders. The following conversation between two ladies was heard. "Who are these men?" "These are deep sea divers . . . Ye always ken them by these things round their necks and the wee woolly bunnets they wear." (The Scottish Diver)

After a recent fatality, the following rules of the British Sub-Aqua Club were emphasised. 1. Snorkel surface cover, boat, float, or lookout might have prevented the accident. 2. The first few minutes are absolutely vital in trying to resuscitate a person who has apparently drowned. Start resuscitation in the water. 3. Weight belt quick releases should be checked each time they are put on. 4. Before entering water, make sure of the exact position of the weight belt and harness release. Practice with your eyes closed. 5. Inflatable life jackets can support two people in the water quite comfortably. 6. When diving in pairs, remember to stick together at all times. (British Triton)

A group of amateur frogmen have hauled seven cannon, believed lost in the sinking of a British fleet in 1711, out of the waters of the lower St. Lawrence River near Pointe Aux Anglais, Quebec. The cannons were part of the armament of a fleet under Admiral Hovenden Walker which was headed upstream to attack Quebec. Most of the vessels were sunk or wrecked on August 22, 1711.

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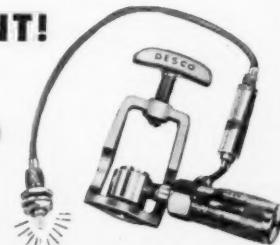
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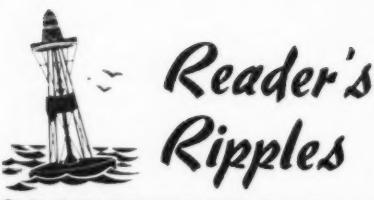
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SKIN DIVER MAGAZINE

P. O. Box 111

Lynwood, California



(Continued from Page 2)

... I would like to exchange correspondence with divers in the United States and Canada regarding spearfishing and photo exchange.

Don Stewart
3894 Parker Street
Vancouver, B. C., Canada

... In the May 15th, 1961, issue of Diving News, there was reference to a 35mm film called "Secrets of the Reef." This was produced at the Marineland Studios in Florida. I would like to know if this film is available for showing, and what the content and cost would be to our club.

My second question concerns the recent physiology of diving slides, which have been produced by Commander Edward Lanphier. I help out at the Brentwood Y.M.C.A. in St. Louis, teaching the physiology of diving. I would be interested to know if the slides are available for sale, and the approximate cost.

Warren M. Lonergan, M.D.
457 N. Kingshighway Blvd.
St. Louis 8, Mo.

Further information on the first film can be obtained from Marineland Studios, Marineland, Florida and on the second from E. H. Lanphier, University of Buffalo School of Medicine, Buffalo, New York.

... If there is anyone in the Long Beach area who would like to team up with a novice in ocean diving would he get in contact with me. I have my own gear.

Joe Bellin
610 Orange Ave.
Long Beach 12, Calif.

... In January of next year I shall be commencing a yachting cruise of the Pacific. We will be taking an extensive array of underwater equipment including an underwater metal detector. Naturally with such equipment we will be very interested in trying to find a wreck—hence this letter to you. Could you kindly send, or refer me to, wreck information?

K. Williams
11 Hill Street
Smithton, Tasmania
Australia

Several good books are available on the subject of wreck location and identification, though each is of course based on the individual author's opinion and experience. We can recommend, for example, John S. Potter's "Treasure Diver's Guide," available through SDM's Underwater Bookshelf.

... Please send me information on salvage schools, also a subscription blank to Skin Diver Magazine.

Ed. Gordon
635 Sycamore St.
Rocky Mount, N. C.

Three of the leading diving schools in the country are listed as advertisers in Skin Diver Magazine. They would be happy to send you brochures if you request them. Each issue of the magazine also contains a sub blank.

(Continued on Page 8)

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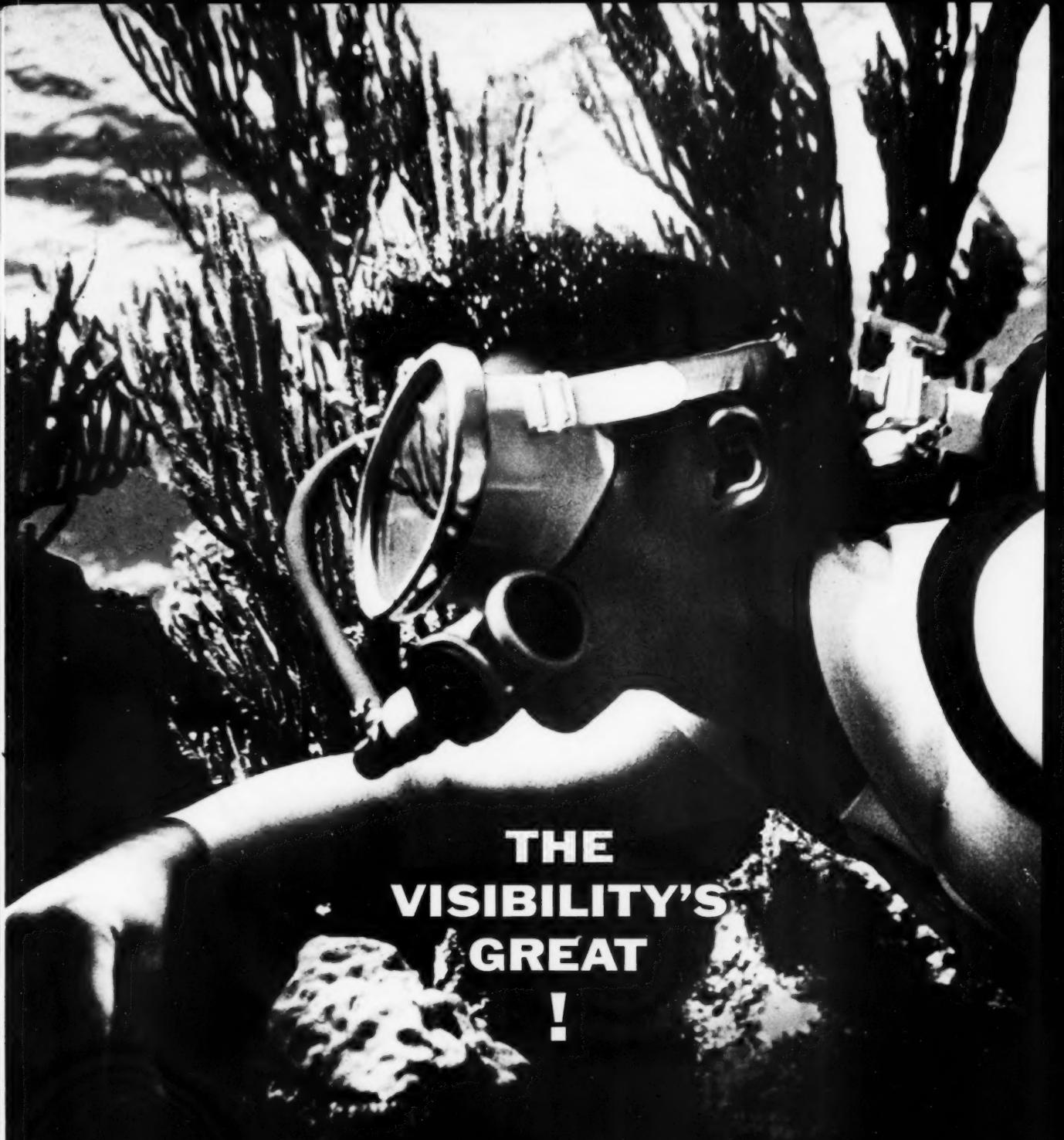
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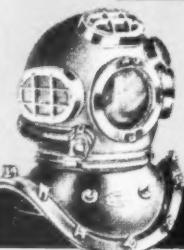
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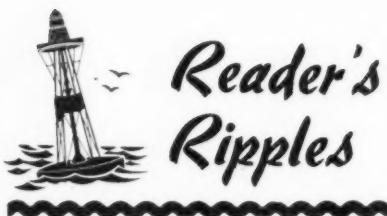
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Reader's Ripples

(Continued from Page 6)

... A group of us are thinking of spending the rest of this summer raising sunken logs and selling them to lumber mills. Could you possibly give us any relevant information on the subject that might help us find suitable locations on rivers, lakes, etc. in the Northeast, including Michigan in the West, in Virginia in the South and in Maine in the East, and, going as far North as the "black fly line" in Canada. Naturally we would prefer the locations nearer to us.

Aside from geographical information, any other helpful hints would be appreciated, such as legal aspect or equipment, techniques, prices, what to look for, etc. The only literature we have found on the subject is a chapter in John Cayford's book, "Underwater Work."

Has your magazine ever published an article on the subject? We have thumbed through quite a few back issues and have found nothing.

L. S. Strood
264 Clay Avenue
Rochester 13, New York

See "Reader's Ripples," September, 1961.

... It would be appreciated very much if you could let me have a drawing of the "Addict" gun previously mentioned in Skin Diver Magazine. It seems the answer to the skin diver's speargun problem.

Brian Jones
Loveday Street
Johannesburg, South Africa

Complete plans for the construction of the Addict gun, courtesy of Mr. Ron Church, are published in this issue, page 28.

... With reference to your magazine, I find the reading material and advertisements pertaining to skin diving and scuba very interesting and informative. It would be interesting however, to see a few more Canadian advertisements in this magazine as our customs laws are prohibitive and add greatly to the very enticing low initial American cost of equipment.

A. M. Pamment
1-451 Greenwood
Winnipeg, Manitoba, Canada

... I have read some of the Ripples other people have sent in to you. I feel you are expert enough to answer a question once and for all. I am 13, I love diving, have a mask, flippers and snorkel. My father says I should wait until I'm older before I use more advanced equipment but I have read of professional divers who have been diving since they were as young as 12. Your answer should settle this.

Mark Rinkler
1482 Morris Ave.
Bronx 57, New York

Sorry Mark, but we'll have to go along with Dad on this one. The pros you mention started when equipment as we know it wasn't even available. In fact, many of them designed and built present day gear as they grew in diving. Why not give it three more years and, in the meantime, enjoy one of the most fascinating, challenging aspects of our sport . . . snorkel diving. Many of these same pros still prefer it.

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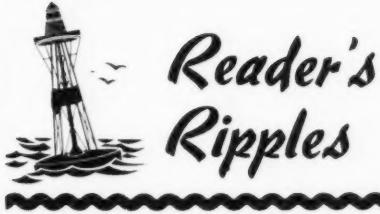
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Editors, I have a hint here is something you might print, it's poem about the sea along with some photography. Please, return if you don't use it, some other magazine might choose it.

J. McShutter
No. 11 39th Place
Long Beach 3, Calif.

We thought and we studied, Our files we did search in for a poem somewhat better than "Ode to An Urchin."

The poems we found there were both rare and good, McShutter's "Sea Urchin" in a poor place stood.

But democratic, always fair, an expert we did seek. We sent "Urchin" to Kohler and asked him to speak.

Ralph Waldo Kohler, the wise one, generously promised he would make his expert comments in that famed column, "Driftwood."

... I would like to contact skin divers in the Caribbean or Bahamas area. I am trying to locate a spot to set up a skin diving depot, air, boat, and equipment, etc., to take parties out daily. I have the cash for the venture. Perhaps some of your readers could help me out.

Ernest Sholtes
SS Exportor
American Export Line Inc.
River and First St.
Hoboken, New Jersey

... This is an old story, but unless something is done it will continue to be just the same old story. Everyone says display the Divers Flag and be proud to be a diver. I have always done this. Still, boats come right up to our floats and in some instances boatmen have been known to grab the flag without stopping. It seems to be great sport for the boat owner, but it sure isn't for the poor diver. Divers, themselves, sometimes act in a manner that makes it difficult for other divers to use the area later.

If the ten per cent involved would stop acting like kids, everybody would be better off.

Richard Landers
16 Hooker Street
Rochester 21, N. Y.

We find it difficult to believe that any boatman would be ignorant enough to intentionally drive over an area where a diver could surface at any moment, though this is not the first report of such things happening. In boating, as in diving itself, there are "sports" who will only learn when it is too late. Give some thought to what the Alamo Barracudas (in this issue, Reader's Ripples) are doing. They are on the right track.

... I would like information concerning a skin diving club in the Santa Monica, Calif. area. I am 17 years old and a diver.

Phil Philbin
705 Ocean Front
Santa Monica, Calif.

(Continued on Page 11)

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A SKIN-DIVER STAY AT 105 FEET



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MISS INTERNATIONAL BEACH TEMPTRESS

THE WINNER!! And Texas does it again. Lovely, honey-brown haired Nancy Lynn hails from Fort Worth, podnuh, and boasts a stunning 36-23-34. The blue eyed beauty, from a state where women are women, loves skin diving, swimming and skiing (water, that is). Photographer Pete de Lackner shot the young drama student, who, incidentally, has a screen test coming up, with a Rolleiflex 3.5 using Ilford FP-3 film and a yellow-green filter.



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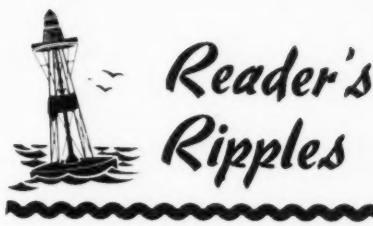


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Reader's Ripples

(Continued from Page 9)

CAN YOU IDENTIFY THIS FLAG?



Answer:

BOATS should keep 100 feet away
from this FLAG—as it is a DIVER'S
FLAG which indicates there is a
DIVER below. Violation of this rule
may lead to a serious or fatal accident.

It Could Be Us!

Members of the
ALAMO BARRACUDAS DIVING CLUB

... Illustrated is a poster that our club had printed to distribute around in the local area. Also we use a Divers Flag business card to get new members into our club. We feel that both have bettered the diving situation in the San Antonio area and we would like to pass the idea along to the rest of the divers that read your magazine.

We have a fairly small club with only about thirty-five members at present but we are quite active. About a year and a half ago we formed a team which we called the Civil Defense Marine Rescue Team and offered our services to the local Civil Defense unit. The offer was accepted at once and since that time we have recovered a number of drowned victims and have rescued a few persons from flood waters.

Our idea behind the poster is that if clubs around the country will have posters printed and distribute them around to the local boat dealers and at the body of water where they dive then maybe people will stay clear off the area where they dive. The local people here were coming over to our boat to see what the activity was and to ask what the flag meant. Now they know and we are not bothered with them anymore. However we are still plagued with the nuts behind the wheel.

In closing I would like to add that we enjoy your magazine very much and keep up the good work.

John Hart
Secretary-Treasurer
Alamo Barracudas
423 S. Alamo
San Antonio, Texas

Great!!

... I have just completed the script for a book on underwater photography and am now looking for suitable illustrations. I am trying to make a world wide selection of underwater photographs and wondered if you could help me with the American section. Have your readers any pictures showing underwater fish and scenery off the coast of the U. S.? Any information with the photographs such as location, subject, film, exposure, camera housing etc. would help me considerably when composing the captions. Any photographs published would be credited.

Mr. H. E. Dobbs, B.Sc.
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LONG ISLAND SOUND

By RAY WAGNER

THE SILVER BAR WRECK

"**T**HREE'S A CALL coming in over the radio-phone." I looked up from my charts and saw Lon Adler, wide-eyed, standing in the doorway of my cabin. "It's Howell," he continued, "I think he's onto something." "Oh yeah," I said inquisitively. "Let's see what that old shark is up to."

Lon and I raced up to the wheel house where Cliff Hayes and Enri Buseau were hovering around the Raytheon. Cliff had the mike in his hand and when he spotted Lon and me entering he pressed the transmitting button down and said, "OK Howell, here's Ray, go ahead." He released the button and handed the mike to me.

"Ray here, what's up?" I said.

"Man, have we stumbled into it," blurted Howell over the speaker. "We've got a big one."

"Well, what is it?"

"Silver," came his excited reply. "Silver bars, John-

son's bringing them up now. Stop what you're doing and get over here fast."

Stunned and elated, I handed the mike back to Cliff, telling him to get Howell's position and then check out. "Stop what I was doing," I thought to myself. For five years I had researched and planned this treasure hunting expedition to Bartlett reef off New London, Conn., to salvage the remains of the sunken privateer "Defense." For countless months I had traced down old manuscripts and letters pertaining to the treasure lost in that old wreck. I had received valuable assistance from such treasure hunting experts as Robert Nesmith of Foul Anchor Archives, in Rye, New York, and William Wedgwood of U.S. Treasure Maps, in Evergreen, Colorado. And the contributions made by the noted treasure authority, John S. Potter Jr., whose report on this project will be presented, among others, in the forthcoming Fawcett publication on treasure hunting, must also be gratefully

acknowledged. Just to stop now, when we were directly over the wreck of the "Defense" . . . My thoughts were interrupted when I looked up and saw the anxious expressions on the faces of my crew. We had been diving for five days, working out of Bob Canary's Aqua Sport Shop in Groton, Connecticut, with no success. With all our research and diving experience the lost treasure had eluded us, while Howell, aboard our other boat, the Mela II, had found silver on Long Sand Shoal in a wreck that had been disclosed to me by a friend living in nearby Connecticut.

It was a vague disclosure, a mystery ship, her name unknown, which sank sometime in 1890. The only clue was the chance reading on a magnatometer that my friend was using while investigating that long, narrow reef in Long Island Sound. He told me that the needle "jumped a mile" when his boat drifted over a certain spot. He made an exploratory dive there and found the wreck. He was sure, and he convinced me, that the wreck contained a treasure.

Two hours later I and my crew joined Howell on the Mela II. "We found it on the mag," boasted Howell. "The needle popped like crazy when we hit this spot."

"I'll bet you boys jumped as fast as the needle," I said with a laugh.

My partner, Howell Brose, had photojournalist Dick Unsin, Phil Dertch and James Johnson as his crew. We were fortunate in having Johnson along with us. The crack diver had heard of our expedition in Miami and flew up to New York to join us. Fortunate, I say, because it was with his skill that the Wagner-Brose Marine Expedition Co. was able to retrieve six silver bars from the ancient wreck. A feat which borders on the impossible.

I saw Johnson sitting on the fore deck, examining the silver treasure. Anxious to see the loot, I and my men clambered forward.

"How did it go?" I asked Johnson.

"Rough," said Jim somberly. "Real bad. There's a three knot current down there. Strong enough to rip the mouthpiece right out of your mouth."

"How deep is she?" I queried.

"Thirty-eight feet. And she's jammed bow first deep in a crevice of the reef. The old tub is rotten all through; the timbers are piled one atop the other, a real tough one to work."

"How do you mean, tough to work?" I prodded further.

"Well, with the current running so swift I had to work in a horizontal position with one hand constantly holding onto something. My fins were useless and my legs just stretched out behind me, held firm in the grip of the current. I had to pick my way under slimy planks, collapsed bulkheads and tons of debris.

"It's a wonder you found anything at all," I said with surprise.

"Hell, this is peanuts," shouted Jim. "Why there's dozens of bars still down there."

Lon jumped up, obviously perplexed, "Then what're we waiting for?" he demanded.

"Equipment," answered Howell. "We need better hoisting gear, some heavy duty tackle, 'A' frames, you know, the big stuff."

"Yeah, but I'd like to give it a try," pondered Lon. "What do you say Jim, do you think there's a chance of finding a few more bars?"

Johnson looked hard and answered hesitantly, "Sure, but it's pretty risky. She's on the verge of collapse now; just touch one wrong timber and the whole thing's liable to come down on you."

There was no holding Lon back. Against all our protests he put on his scuba gear and dropped over the side.



Author Ray Wagner breaks the surface shouting. He has just been down to the rotting planks of the "Silver Bar Wreck." (Photos by Richard C. Unsin)

"Follow that line down," yelled Jim, pointing to a half-inch manila hanging taut over starboard. "It's fastened right to the wreck."

Half hour passed and there was no sign of activity from Lon.

"I'm getting a little worried," Jim whispered to me. "I think we'd better go down for a look."

"I think you're right," I answered with a nod. "I'll go down first. Get yourself ready with some gear, and if there is anything wrong . . ." I didn't like the sound of that so I stopped talking, suited up and rolled overboard to disappear beneath the waves.

I followed the line to the bottom where it was securely lashed to a heavy beam. Visibility was good to about fifteen feet but nowhere could I find Lon. A few minutes later I returned to the surface to get Johnson. He was ready to go and together we descended upon the wreck, swimming first along its one side, struggling against the powerful current, forward toward the bow; then circled back on the other side. No sign of Lon. Suddenly Jim grabbed my shoulder. I turned and saw him pointing toward a spot at the stern end of the wreckage. There

(Continued on Page 57)

Crack diver James Johnson holds one of the six silver bars recovered on Long Island Shoal. Johnson is a member of the Wagner-Brose Marine Expedition Co.



PREHISTORIC ARTIFACTS FROM THE SEA

By NEIL F. MARSHALL

THE MUSEUM OF THE SEA

Photographs by ROBERT DILL
DR. A. RECHNITZER
PAUL GANSTER

HERE HAS BEEN a great deal written and much talk on the subject of underwater archaeology. The trend of most thinking is invariably centered on one idea; that of finding treasure. An article appeared in "Skin Diver Magazine" December 1960 issue that was written by Mr. Thomas Synott who stated that, "The sea has been called the richest museum in the world." This article closed with the words, "in the future discoveries will be made in the sea that will stagger the imagination."

We live in a world of changing values and it is a question as to what is the real treasure; monetary gain or a greater knowledge of the world in which we live, not only as it was in the past but as it is at present. It is for the value of knowledge and interest that we feel the entire field of underwater search and pleasure be enlarged to embrace the discovery of archaeological artifacts. This may easily be done by the individual with a little familiarization of the material and with this knowledge he may realize more satisfaction from diving and possibly accomplish more than just getting wet.

Photography
ROBERT DILL
DR. A. RECHNITZER
PAUL GANSTER

An example of artifact recovery is the exciting discoveries of prehistoric materials found underwater along the Southern California coast. Divers from the University of California at San Diego (Scripps Institution of Oceanography) have recovered from one site alone approximately two thousand stone artifacts. Skin divers in the La Jolla area have recovered for their own collection approximately an equal number. These recoveries have been made from the shallows and on out to depths of one hundred feet. The archaeological contributions that these men and women divers are making, together with the new vistas of research that they are opening up to the prehistorian, are of incalculable value. It is almost certain that in your diving along Southern California coasts you have passed up materials lying on the bottom which represent cultures many thousands of years old.

In Southern California the season dictates the beach profile, the changes are many and are easily recognized. Throughout our summer months the focal point of wave generation is from the south and we experience southerly swells all along our coast. These swells are gentle in nature and cause great amounts of sand to accumulate along our beaches. There may be as much as eight to ten feet of sand accumulated vertically during this period. In our winter season, when we have strong storm waves generated from the north, this great quantity of sand is removed. The waves erode the beaches and transport the sand back to deep water thereby completing our yearly cycle. At this time many of our beaches are all but completely denuded and large cobble patches are exposed to shallow water. (See photo on facing page). It is in these cobble patches that many artifacts are found. The known underwater sites are generally found off shore from those land areas where sloughs and lagoons exist now or did exist in the past. This is a point which might easily lead to the discovery of many more underwater sites. The location of these areas is reasonable when the needs of the inhabitants are taken into consideration. Fresh water is always of primary importance and is, or was, produced by the canyon streams draining into the sloughs and lagoons. This environment encouraged plant food growth which in turn allowed for a concentration of wild life and all these things met the requirements necessary to produce human habitation.

A brief glance at geological history tells us that ten to fifteen thousand years ago the vast continental glaciers began to recede and liberated untold quantities of water that flowed off the surface of the continent, down through

the valleys to the lagoons and sloughs, and then to the sea. As the glaciers diminished in size the sea level began to rise; through radio carbon dating this rise has been graphed and we can say with some assurance that the sea level six thousand years ago was thirty or forty feet lower than it is today. This would extend our present Southern California shoreline some 2000 feet. The original inhabitants of our Southern California coast, then, must have occupied these areas where the environmental conditions best fit their needs. These early peoples lived, died, progressed, regressed, and built their middens in an area which has now eroded away because of the continued advance of higher sea levels during the last several thousand years.

Various underwater sites are known from Santa Barbara to the tip of Baja California. The materials collected from these sites vary in type and also in their location with regard to depth. We surmise that those materials found at greater depths are the oldest if they are recovered in quantity; although isolated artifacts may have been lost in boating or rafting accidents. The personnel from the University of California at San Diego have recovered material from Santa Barbara, Redondo Beach, Oceanside, Carlsbad, Cardiff, Solana Beach, La Jolla, Bird Rock, Pacific Beach and San Ysidro. Many areas other than those meeting the environmental requirements may be productive for the alert skin diver.



FIGURE 2

Fig. 2 shows an accumulation of typical artifacts discovered in the La Jolla area. The depth of recovery varied from twelve to forty feet. Fig.



FIGURE 3

3 shows a group of our justifiably famous stone mortars. These mortars range from the very crude to the extremely well formed. It is interesting that the cruder mortars were found at middle depths and the better shaped mortars were recovered either at the greater or the shallowest. Some extremely well formed bowls may weigh as much as seventy-five pounds

—see Fig. 4. These were carved from large boulders and have always been found at low tide in no greater depth



FIGURE 4

than twelve feet of water. Fig. 5 is a metate which, with a mano, was commonly used for grinding cereal grain, acorns, and other vegetable foods.

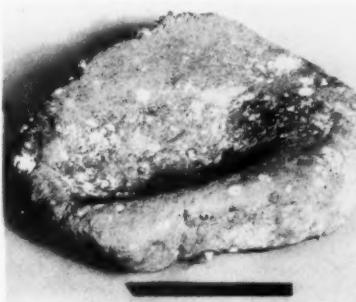
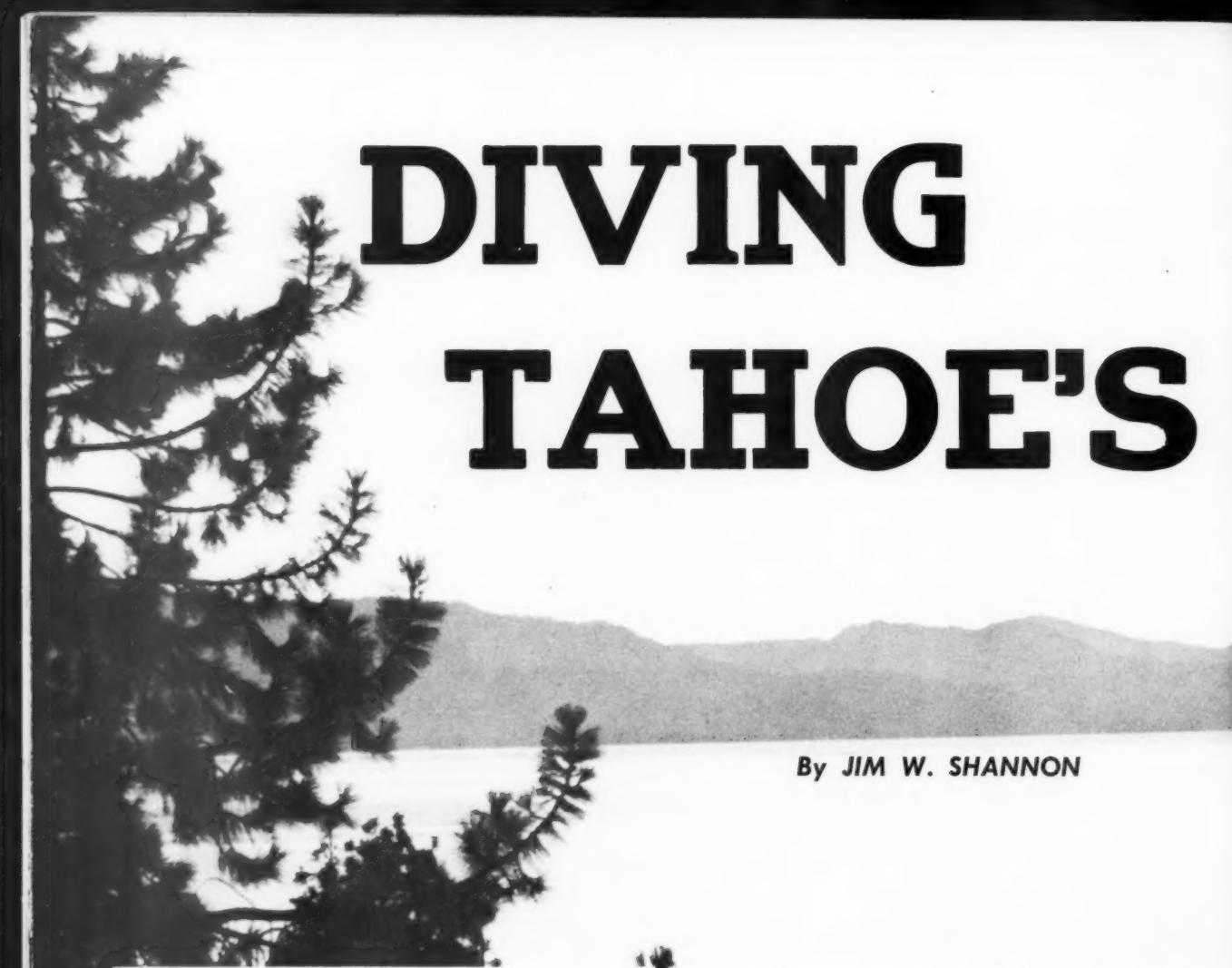


FIGURE 5

The few items described here represent only a small part of the artifact types recoverable. Divers can train themselves to recognize artifacts such as choppers, scrapers, hammerstones, etc., and thereby increase their productivity while diving. The stone work of the early California peoples is quite crude and simple; this places the untrained observer at a great disadvantage and consequently the proportion of the less sophisticated but none the less important artifact recovery has been small. Fig. 6 and 7 represent some of these types. The authors hope that this article will bring to the attention of skin divers the vistas that await the alert and knowledgeable diver and in the end increase the current knowledge of the past by creating new and interested researchers who will add to their diving collections as well as to the knowledge of the past. However, if knowledge from your discovery is to be useful, be sure to definitely locate the

(Continued on Page 56)



DIVING TAHOE'S

By JIM W. SHANNON

IN THE GAY NINETIES, for summer vacationists at fashionable and expensive Lake Tahoe, the thrill of a cruise on an excursion steamer came when the captain deliberately appeared to graze the rocks just a few feet off shore from Rubicon Point. Here gentlemen of leisure and a few brave members of the fair sex could gaze down into the bluest of the blue waters of this great Alpine lake. Excursion announcers compared the water coloration here to that of the Blue Grotto of Capri.

The shoreline also offers a spectacular view. Six hundred feet above the surface of the lake begins a wall of motionless tumbling granite boulders which descend endlessly into the glowing blue depths.

For many years the lake was considered bottomless at this point. An 1880 newspaper reported a line was dropped 3,000 feet without reaching bottom. Since that time more modern techniques have charted the maximum depth just a few yards off shore at 1,406 feet.

Even in those good old days the white sand beaches of Rubicon Bay were a favorite setting for champagne luncheons. The popularity of the area has increased throughout the years so that now a hot summer's weekend finds every grain of sand covered by the beer and pop set. But in spite of the crowding of civilization one still does not have to travel far to discover a world of placid isolation and fascinating vistas. Within twenty feet from shore the transparent, icy waters tend to discourage and return to the warm strand all except polar bears and wet suit clad skin divers. To those who venture on awaits a scenic thrill

far surpassing that enjoyed by the lighthearted excursionists of many years ago.

To conserve our air for diving beyond the point, my diving partner and I choose to snorkel from the beach to the point. Skimming across the bay I dive down to scatter a handful of white sand and discover the bottom is already far below me. To my left the combination of crystal clearness and motion of the surface water industriously creates another illusion. High on its legs above desolate sands, long tail trailing behind, hurries a desert roadrunner. A closer inspection reveals the masquerader to be a sedately moving crayfish.

Approaching the rocky point we are surrounded by an armada of gleaming minnows. Breaking the surface, darting in and among the rocks, they seem to enjoy the company of the two black suited intruders. Then from far below, swimming up through the blue haze, comes our first glimpse of one of Tahoe's famed outsize trout. This fellow, searching for hors d'oeuvres, could be the reason for the compatibility of our minnow escort.

From the point through deepening green the gently sloping sandy bottom continues for a few yards. Then abruptly the hue changes to the famed glowing blue. Here is the beginning of the big deep.

Changing to scuba breathing we swim down through the translucent waters to a huge boulder resting on the rim of this chasm. Peering over its edge we view a fog enshrouded Grand Canyon. Through the mists dim outlines of another set of boulders can be seen. Shoving off from the slippery granite we soar through the icy liquid

BLUE GROTTO

settling in a cloud of sand on a forty-five degree incline about twenty-five feet below this first mass of rock. A few yards below the next set of boulders pop into clear perspective. We take a giant leap down this step. The shaded outlines of the next boulders appear within the circumference of our vision. Perhaps this giant granite stairway continues to infinity. At this depth the incredible blue glow completely surrounds us, above, below, and on all points of the compass. A chilling cold completely surrounds us, too.

Slowly ascending from this refrigerated void we follow the bare, dead trunk of a pine. Picking up a can resting along the log, I surprisingly find it has come to a more useful end than is the usual fate of a tin can. It is currently inhabited by a small crayfish where he is well protected from becoming a Mackinaw meal. In the meantime my partner has plucked a souvenir from a crevice—a pair of gleaming Mackinaw spoons.

My attention focuses on a brilliant blue object just under the edge of a rock. Thinking such an intense, vivid hue could only be man-made origin, such as a piece of rubber or plastic, I reach for it. It withdraws. It's the claw of a good sized crayfish. Nature seldom endows any of its creations, be they plant or animal, with a true blue tone. But here is this unbelievable blue color repeated even on the inhabitants of this weirdly iridescent region. The crustacean's shell contrasts in vividness with that of one of its well boiled salt water cousins.

Surrounded by a more hospitable temperature we follow the perimeter of the canyon south from the point.

Along this sandy stretch and in the many crevices among the rocks near the shore lie wave tossed debris. An antique bottle, a battered crate, tangled lines are included in the lake's collection. Scattered here and there are a few ageless, weathered timbers. Seeing these I silently wondered if we were gazing upon the remains of the "Nancy," a four ton whale boat, whose demise one stormy October night in 1873 ended a Tahoe tradition. She was the vessel of Captain Dick Barter, an old English sea captain, recluse, and caretaker of an Emerald Bay estate. While returning home from a convivial evening at a south shore tavern, gale winds blew the Nancy off course and waves smashed the boat against this rocky point. Half of a snapped oar and some remaining splinters of the ship were recovered the next day. The salty old hermit's body was never found.

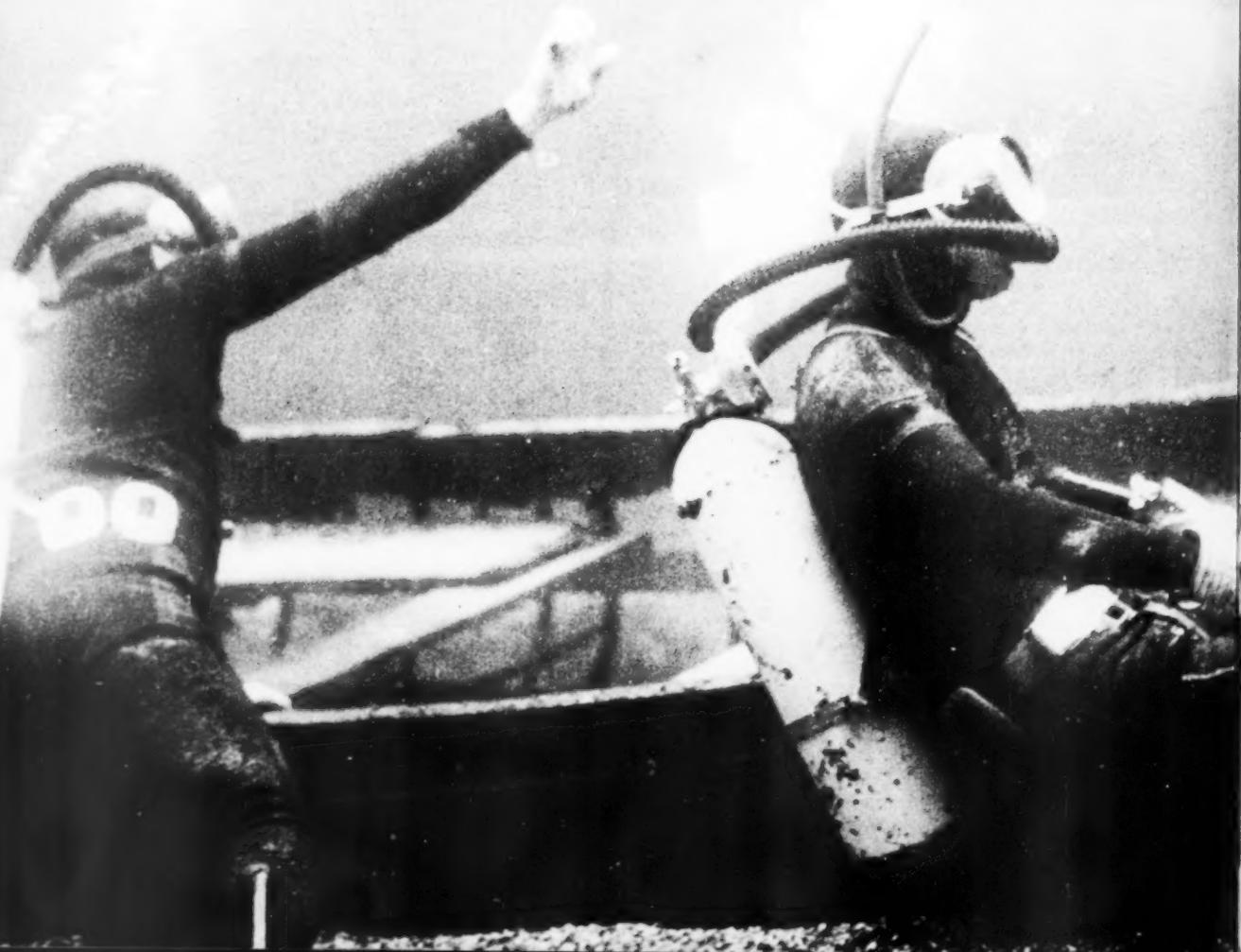
At this point of our exploration the white strand narrows and suddenly is replaced by a sheer granite wall which fades into the ghostly blue mist. If this is the place where Captain Dick went down for the last time his body could still be falling through the unexplored blue abyss. This is the Rubicon Deep.

Thoroughly chilled by sight and temperature we begin the return trip. Our playful finny escort leads the way. A small Rainbow runs just ahead always tantalizingly out of reach. As we surface in the bay, the silence of the Rubicon Deep is broken by the sounds of civilization. But the laughter of sunbathers and the buzz of outboards are powerless to overcome the silent solitude of the magnificently awesome depths. ➤

UNDERWATER INVESTIGATORS

By SGT. HARRY KEEVER

(Los Angeles Police Department)





Author Harry Keever, suited up and ready for a dive with the Los Angeles Underwater Search and Recovery Unit. (LAPD Photo)

"How would you like to go swimming?" Deputy Chief Thad Brown, Commander of the Detective Bureau, was speaking. Sergeant Harry Keever's reply was immediate, "Fine."

It was November 14, 1957, and Chief Brown had just received word from Sergeants Danforth and Light, of Wilshire Detectives, that a murder suspect had told them of throwing a murder weapon, a revolver, into the ocean from the Santa Monica pier. The detectives needed divers to recover the gun.

Sergeant Keever and Officers Jim Leachman and Gil Booth were soon at the Santa Monica pier with full scuba diving gear. The sky was overcast; it threatened rain at any moment, and the water temperature was below 60°, but this did not hinder the divers, as their equipment included rubber suits.

The suspect had shown the detectives exactly where he stood when he threw the gun. A guide rope was stretched on each side of the area and divers entered the water and descended to the ocean floor.

The water here was about 50 feet deep and the bottom was hard-packed sand. A systematic search was made,

but the gun was not found. After about 45 minutes, the divers returned to the surface and learned why they had been unsuccessful. The suspect was on the pier with the detectives when the divers went down. When he realized his story was being verified, he changed his mind, admitting that the gun was not in the ocean, but was hidden near the scene of the killing. He subsequently led the investigators to the gun.

This underwater search again brought to the attention of the department the fact that there was a need for "underwater investigators." Deputy Chief Brown, with Chief Parker's approval, directed an Underwater Search and Recovery Unit be organized.

The City of Los Angeles covers an area of 453 square miles. Within the city limits are:

11½	miles of ocean frontage
8	lakes in city parks
28	reservoirs that are a part of the city water system
4	Federal Flood Control dams
7000	acres of water and 28 miles of waterfront in the Los Angeles Harbor.

Much criminal evidence is lost beneath the surface of these various waters. On July 11, 1957, a bag containing the body of a woman was found floating in the Los Angeles Harbor. The killer had weighted the bag with rocks, but not so many as to keep the body from floating to the surface.

Evidence of crime that was once safe in "Davy Jones' locker," is now accessible to divers who, with self-contained underwater breathing apparatus—abbreviated scuba—can swim freely about the ocean floor to depths of one hundred, or even two hundred feet. Divers can weave between rocks, pilings and other obstructions with speed and freedom not possible with heavy diving gear.

Since 1954 various officers have made official dives for the department, but never as an organized departmental function. Now the Search and Recovery unit is an official part of the police department. A roster of names of divers will be maintained and they will be called upon whenever an underwater search is needed as a part of a police investigation.

Each of the 45 members of the Underwater Search and (Continued on Next Page)



Underwater Investigators from the Ohio State Highway Patrol train in a pool for search and recovery work. (Photo by George Smallreed, Jr.)



Sgt. Keever is interviewed by Associate Editor Ross R. Olnay as he prepares search for loot from a burglary. (SDM Staff Photo).



Gil Booth of Los Angeles' unit hits the water on a recovery job as Harry Keever watches. (LAPD Photo)

(Continued from Last Page)

Recovery Unit has from \$200 to \$500 worth of his own equipment. Most of them dive for sport the year round. Some are Navy divers and have had experience with the Navy UDT teams or in Navy Salvage diving. Many hold Red Cross cards and two hold Los Angeles County Underwater Instruction cards.

Some of the dives made in the past may be of interest. Sergeant Ray Daugherty of Newton Detectives dived in the water of Ballona Creek near Playa del Rey to recover about \$2500 worth of precision tools dropped from a bridge by a burglary suspect. As a bonus, Ray also recovered a safe taken in a West Los Angeles burglary. The suspect who threw the tools in the water was convicted.

Later the same year a policeman's brother and his wife were killed by the wife's former husband. The suspect's car was seen parked on a road overlooking Point Dume, south of Malibu. Thinking that the murder weapons might have been thrown in the ocean near here, Lt. Ruiz, in command of 77th Street Detectives, requested an underwater search of the ocean below the point. A search of the rocky bottom below the cliff was made, but no guns were found. Officers who participated in this diving operation were Lee Chapman, Pat Grutch, Dave Stanton, Gil Booth, Jim Leachman, Victor Farhood and Harry Keever.

All dives are not accomplished in the ocean. A truck driver was driving along Stone Canyon Road in the Hollywood hills. He apparently had a heart attack and drove through a six-foot chain link fence into Stone Canyon Reservoir. Pat Grutch, a diver of several years' experience, found the man still in the cab of the truck, in about 75 feet of water, where the truck had slid down the steep side of the reservoir.

Sergeants Jim Brady and Kenny Beck dived for three days in the waters of Silverlake Reservoir before they found a gun used by robbery suspects. The gun was proved ballistically to be one used in a shooting during a robbery. With the gun as positive evidence, the detectives were able to clear seventeen robberies and five men were held for robbery and narcotic violations.

In another case, a burglary suspect took a cash register

from a business establishment in Harbor Division. He threw it in the water near Berth 120. The drawer, which had been pulled from the register, was thrown in separately. The water was about 30 feet deep at high tide, but only 5 feet at low tide. The suspect, when apprehended, showed the detectives where he had thrown the register and the drawer. The register was probably seen at low tide and taken by the finder, as it was not recovered. However, the drawer was still on the bottom of the harbor, and was recovered by Jack Eberhardt of Harbor Division.

The first training session of the Underwater Search and Recovery Unit was held on March 29, 1958, at the Lynwood Municipal Natatorium in a beautiful 50-meter pool.

This first session included a 25-minute film on skin diving, shown by Don St. Hill, Chief Diving Officer of the Los Angeles County Life Guards and Underwater Team.

Instruction was given in the use of scuba gear and "buddy breathing" was practiced. Search patterns that are used in the various types of water conditions were explained.

The dangers of diving were also explained by Officer Jim Leachman. Some of these are: air embolism, spontaneous pneumothorax, the bends, carbon dioxide poisoning, and nitrogen narcosis. Anyone who contemplates using underwater breathing apparatus should have a thorough knowledge of the physics and physiology of diving before entering the water with a lung on his back. There are many changes that occur when the body is under water pressure that do not take place when one walks on land. Lack of proper training is the real danger in diving. Sharks, octopi, and moray eels account for a very small number of accidents.

The first training session was a great success and further sessions have been held periodically since then.

The members of the Los Angeles Police Department diving unit are glad to volunteer for this duty as they feel that it is a special opportunity to serve the department and the community.

The new unit's usefulness was proved just nine days after it was activated. The body of a 4-year-old boy, reported missing to the police department, was recovered from a water-filled run-off basin near International Airport by members of the unit. A tragic duty, and sad beginning; but a necessary job, and one that was handled well, bringing credit to the department.

Recently the unit was called upon once again by the department to recover items stolen from a local school. SDM's reporters accompanied the crack team and saw them recover evidence that at one time would have been lost forever. In minutes they established a search pattern which would cover the general known area and soon evidence was being brought ashore.

LAPD's search team is an example of what is being done. Others are shown on these pages. ➤



Fred Leete (center) instructs the Indiana State Police Rescue & Recovery Unit in the use of diving equipment. (Photo by Diver's Supply Co.)

The West Hartford, Conn., Police Department Diving Unit is on call 24 hours a day. Instructor is Will Jacobs, 3rd from left, top row.



OCEANOGRAPHY

By ROSS R. OLNEY

[Ninth of a series on the importance
of oceanography in the next ten years]

Oceanwide Surveys

To TRAVEL from Los Angeles to Chicago by automobile is, today, a fairly simple undertaking . . . even if the trip has never been made before. Grab a map from any local service station, hop into an automobile, and go. Perhaps by this afternoon you can expect mountains, tomorrow morning the desert. These things you know. You also know where the major population centers will be encountered, you even have a good idea of the weather and temperatures you will face.

How is this done? From where does all this valuable information come?

From the free map you picked up at the start of your trip.

But consider the same trip on a map of the 18th century, if such a map were available. Nothing would be shown except, perhaps, the very major population centers and mountain ranges. The journey would be most difficult, even impossible without a guide or "wagon master."

This is the shape of the maps of earth's oceans beneath the surface. And maps are basic tools for all the sciences that deal with the oceans. However, with world-wide, ocean-deep surveys, such maps can be made. Particularly now and in the next few years, when the full value of such maps can be realized, and such a survey aided by new scientific devices.

The sea affects our weather for days, weeks and even years ahead, the sea contains fantastic amounts of animal protein, the sea holds untold amounts of wealth in precious minerals, the sea is a potential battleground and could affect our national security . . . for all of these reasons, plus the fact that many new concepts will come from a detailed study of the sea, the seas of the world must be mapped.

Four different factors should be included in this mapping.

The shape of the bottom and the carpet of sediment.

Geomagnetism, heat flow, gravity, seismic and crustal studies.

Primary productivity, composition and distribution of plankton and the larger forms of marine life.

Distribution of water properties such as temperature, salinity, density, and sound velocity.

To describe the oceans in terms of these four factors and how they vary according to time, etc., will require an extensive program of data collecting, sample collecting, recording of observations, and analysis and distribution of data. This will obviously call for the participation of different countries in a cooperative international effort.

Our present concept of the types and measurements and general intensity of coverage needed includes a study of the physical and chemical features of the oceans first. The characteristics and general conditions of the entire water column, including seasonal changes. Truly synoptic pictures of selected parts of the ocean are needed with data

collected quickly, processed rapidly, and ready for interpretation within a short time. Such data could be used for forecasts of both oceanic and atmospheric conditions.

A biological survey will give us a clear picture of the communities of living marine organisms, population sizes and productivity.

Bottom features and geological features can be accomplished through depth soundings and core samples, with continuous sounding and sampling from underway ships with as great a precision as possible.

The area of the ocean is about 360 million square kilometers, of which about 10 percent represents the continental shelves, only part of which are fairly well surveyed. Eight percent of this area is covered by ice, presenting special problems. The remaining total to be surveyed is approximately 300 million square kilometers.

Arctic technology is improving so rapidly that it is impossible at this time to discuss surveys in this area. It is possible that by 1970 under-ice survey on an international basis could be made with nuclear submarines.

As discussed in the Research Ships section of this series (SDM, July, 1961) new ships will be necessary to carry out this program.

The number of ships required to complete the survey has been calculated in "ship years." To briefly explain the term ship years, if a particular job or survey is calculated to take "ten ship years" to accomplish, the job will take one ship ten years, or ten ships one year, with all factors (time between stations, drydock time, etc.) being considered.

The magnitude of this survey can be seen in the following figures. It would take a calculated 30 ship years to complete only the physical and chemical observations and synoptic survey of the total mapping. For underway measurements, that is for ships or devices moving and not stationary, the calculated figure is 200 ship years. This means that for one particular aspect of the survey, 200 ships would be needed for one year or, of course, one ship for 200 years. (Or any intermediate ratio)

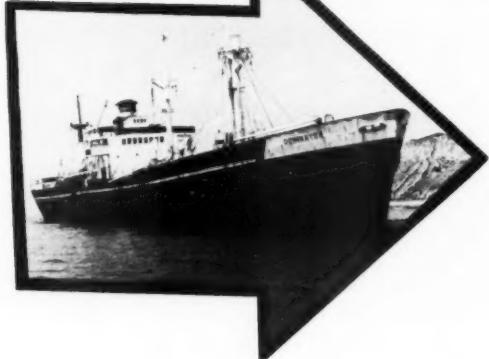
Fortunately, the other necessary measurements (geological, biological, stationary, etc.) can be accomplished in some part along with the above work.

The grand total needed for the complete ocean bottom survey is 261 ship years, of which, based on a percentage similar to the division of the United Nations, the share of the United States would be 78.2 ship years.

This, along with manpower, (discussed in another segment of this series) is what is needed to accomplish the survey set forth on this page. It is comprehensive, complete and, with a view to both scientific achievement and national security, most necessary. ➤

Next Month—International Cooperation.

Reference, Oceanography 1960-1970, National Academy of Sciences



DOMINATOR

DIVING VISITORS TO CALIFORNIA'S WONDERFUL
WATERS MAY SOON DIVE ON THIS ILL-FATED SHIP . . .
WHOSE DEATH KNELL HAS BEEN SOUNDED.

Early morning, March 13, 1961, was dark and foggy along the Palos Verdes cliffs of Los Angeles. Rocky Point, a tangle of sharp boulders, lay waiting silently in the mists. Out in the darkness the Greek freighter Dominator, a former liberty ship 441 feet long, felt her way along carefully toward the safety of the harbor. Her cargo of grain, valued at one million dollars, lay safe and dry in her holds. Then, in the enshrouding fog, she stumbled and smashed into the waiting rocks. There, after many attempts to pull her free, she still rests . . . rocks piercing her hull fatally . . . grain spilling into the water . . . breaking up.

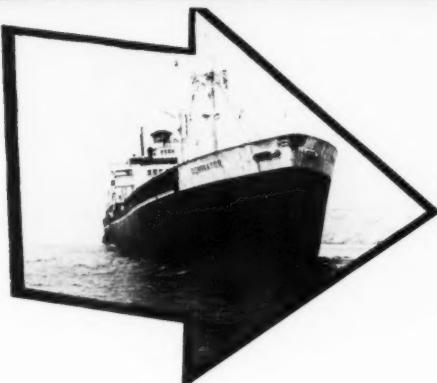


Diver L. Webberley holds a handful of the grain which spilled from the holds of the Dominator. Many tons of grain were salvaged but that which spilled is attracting fish from far and wide.

PHOTOS by
DON SIVERTS



Bob Meistrell, of Dive N' Surf, inspects one of the anchors which was cast out at the last moment in a vain attempt to hold the ship off the rocks. The cable, under tremendous strain, parted.



Rocks beneath the surface were broken and shaved smooth by the hull of the Dominator passing across them.

A diver plunges his knife into one of the smaller holes in the hull of the Greek freighter.



Swirls of grain make patterns in the water as divers Leonard Webberley and Bob Meistrell inspect the valuable cargo.



So the Dominator waits, slowly breaking up on the rocks in the pounding surf. Soon she will be gone, or a rusted hulk.

HAWAIIAN VENTURE



By BEV MORGAN

(Photos by Author)

I WAS DEEP into the tunnel when I heard the flutter of redfish. Though the light was dim, I could see a bend just ahead. They must be on the other side coming my way. Pat Curren had gone into the other entrance of the tunnel and we were trapping the small fish between us. I stopped my movement and poised my speargun, waiting for the first fish. About twenty "menn-pachi" darted around the corner and stopped as if they were catching their breath. I knew where they would stop from previous dives here, so I had the gun pointed in that direction. A very slow, even movement of my gun did not alarm the fish. I fired at a klunker, putting the small school into lightning motion. They blurred by me, their fins causing a fluttering noise. I pulled in my spear shaft pleased to see the klunker was impaled with a good shot. These fish are so fast they can see the

spear flying at them and move before it gets there. The trick is to fire in the direction you think they will run, slightly leading them. My chest-full of air was used up and my lungs cried for more. Just then Pat appeared at the bend. He ignored me as he swam by with a fish on his spear. Good, we had a lucky dive this time. I followed Pat to the entrance and out into the clear water, heading for the surface. We rested a moment on the surface to catch our breath, then placed our fish on the stringer.

This was really living. Here I was in Hawaii diving up dinner out of clear tropical waters. I looked toward shore to enjoy the view of steep, rugged mountains topped with white trade wind clouds. The white clouds stood out sharp against a deep blue sky as they drifted along with the wind. It was the wind that brought me here. Wind pressing on white sails, pushing us through sunlit days and star filled nights as I made observations with the sextant and plotted our way across the Pacific. There is really something about a sailboat and the sea that captures my heart. We had cruised through the Islands, finally reaching Oahu.

I rented a house in the country near Makaha, which is about 40 miles from Honolulu. Here I had set up my equipment and started diving with old friends. In Hawaii the people eat fish as the main part of their diet. To quote a friend, "Feesh mo better dan cheekin!" I found myself enjoying the diet of rice and fish before long. Just before dinner time a group of us would swim out to the reefs and spear several "redfish" for dinner. These fish are called "menpachi," "Kumu," and "Aweo-woo." They all grow to about the same size, the largest I have seen being about three pounds. Two of the average size will make a good meal. Although menpachi are considered the best eating by the local people, I prefer the Aweo-woo. I learned the Currens' name for Aweo-woo was "banana-fish" because it skins as easy as peeling a banana.

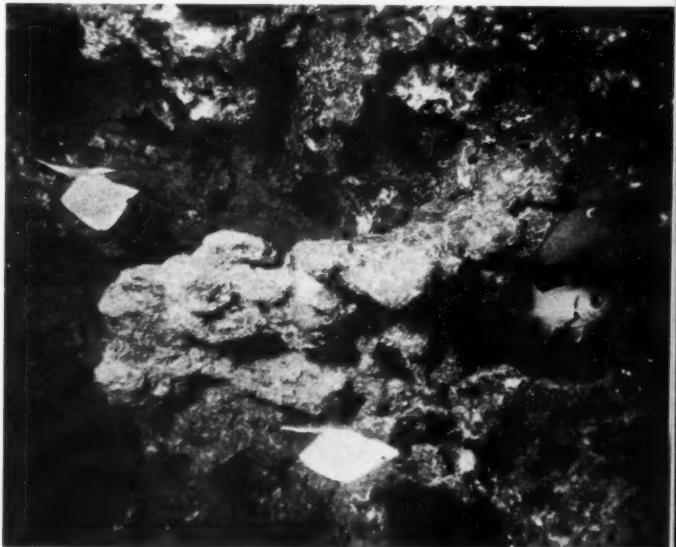
We made a few more dives in the "puka" or tunnel with two entrances, but the menpachi were spooky by now, so we decided to go over to the "wishing well." I was diving with Pat, his wife, Jeanine, and another girl, Patty Williams. The girls are good divers, and it's a pleasure to watch them spearfishing with the same enthusiasm as a man. We swam to the wishing well, named because of its shape, and started to dive. Pat Curren made the first dive and came up with a banana-fish. The girls were excited, so they both made a dive at once. I watched as they swam down the "well," which was actually a vertical lava tube about 15 feet deep with an undercut all around at the bottom. The redfish are night feeders, so during the day they hole up in dark crevices and undercuts. I took a few deep breaths and descended to the undercut, pausing to allow my eyes to adjust to the dim light under the ledge. The girls, Patty and Jeanine, were off to one side trying to aim at the darting fish. I could now see the fish so I aimed my gun first at one then another. It is hard to make up your mind when the menpachi move so fast. They dash to the right, pause, then dash to the left. I had one of the fish wired. I knew he would turn to the left, so I led him to left and fired. He saw the shaft coming and made off to the right. I retrieved my shaft and went up without a fish. I noticed one of the girls had a menpachi, and was on her way up. The divers in Hawaii use a floater for the fish stringer. Attached to the floater is a tow line about 40 feet long with a lead sinker on the end. The diver drops the sinker in his trunks to tow the floater, and lets it drop as an anchor when diving an area. This type of fish stringer keeps the fish a comfortable distance from the divers in the event a shark may be drawn in by the speared fish. Usually the local boys have a dried coco-

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SKIN DIVER—October 1961

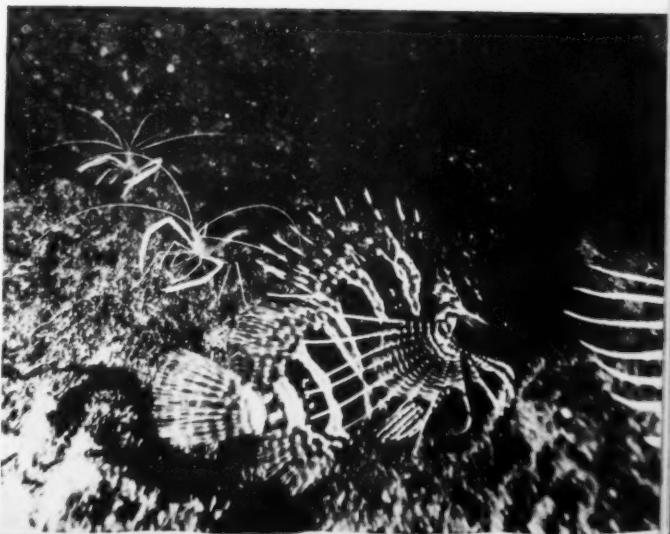


Jeanine Curren curves gracefully under an outcropping of coral, her Hawaiian sling ready for a fast moving Redfish.



Lower center and upper left are "upside down" fish. Lower right is a Menpachi, and the Aweo-woo in the story.

The cleaner shrimp advance on a deadly lion fish. Morgan's wound, to his relief, proved to be something else.





Red Menpachi hover deep in a puka, one of the natural underwater caves off Hawaii.



Bev Morgan, author of Hawaiian Venture, at the helm of the ship he sailed across the Pacific.

(Continued from Last Page)

nut, but Pat Curren had made a balsawood-fiberglass floater that had a torpedo shape.

Pat was down in the wishing well again, with only his feet sticking out of the undercut. He backed out and came up for air without a fish. "They're spooked. I think we have enough for dinner, let's go in," said Pat. We swam toward the beach over the clumps of coral that dot the bottom everywhere. I spotted a ledge that looked like it might have a redfish puka under it. With a deep breath I plunged to the bottom then moved in under the ledge, waiting for my eyes to adjust. In the warm water breath-holding time is extended, so the short wait is not a burden. I saw only one small menpachi, which was not worth spearing, but then I saw a most interesting thing: two small yellow fish were swimming completely upside down, so I made several dives to observe them. I couldn't get in enough time on the bottom to satisfy my curiosity, so I swam on to the beach to get my lung. Pat Curren and his wife walked on over to his house while Patty and I put on the lungs and returned to the ledge. The yellow fish were still about, and in a short while they became accustomed to our bubbles. Normally, they swim right side up, stopping to feed from time to time. When they enter a hole they will swim with their underside facing the nearest part of the puka, be it the roof, side, or bottom. Even in total darkness the fish follows this pattern, and they can travel at top speed in this darkness. My theory is that the fish utilize a system of sonar just as the whale or the porpoise does. Each type of fish has a different sonar system with a different range. Certain fish are called "bottom fish" as they never get far off the bottom, and usually travel in cracks along the bottom. Could it be that these fish have very limited "sonar" and become lost when they get too far off the bottom? I believe this to be true of the "upside down" fish. The reason they swim upside down is due to the location of the sending and receiving apparatus, which requires the underside of the fish to be aimed in the direction of sonar operation. This would explain why the fish that I observed would keep their underside to the nearest part of a puka.

Patty touched my arm to get my attention, then pointed to another section of the puka. I saw two small white shrimp that were equipped with long antennas. These were probably "cleaners" that ate the parasites off fish. These little creatures set up a "cleaning station" in a

puka and the fish come there to have the parasites removed. It is a very rewarding situation for both parties. The fish get a cleaning and the shrimp have their food supplied in the form of the parasites. I was edging into the thin space where the shrimp were when I experienced a very sharp pain in my right shoulder. It radiated pain over my entire arm, and I suddenly felt very faint. I backed out, looking to the right to see what had hurt me. I have never been in a more hopeless position. Not more than 12 inches from my face were two lion fish! I tried to remember what I had read about these poisonous fish. All I could think of was that most stings were fatal!

This couldn't happen to me!

How long do I have to live?

Patty looked at my struggles out of the puka and followed me to the surface. I jerked out the mouthpiece and looked about me. Everything seemed beautiful and horrible at the same time. The mountains were still there, the clouds were still moving peacefully, nothing had changed here in the surface world. I was sucking in the surface air in huge gulps. So this was it! I was dizzy, but I could make out Patty surfacing just next to me. Why did I have to get closer to the shrimp? If only I could relieve the last few moments!

"I've been stung by a lion fish Patty!" I gasped, "I'll try to make it to the beach, ditch your lung—you may have to help me. Now listen, if I pass out remember that a lion fish stung me—they're very poisonous—I'll need an antitoxin—get me to a hospital!"

"You mean those pretty little fish with all the spines?" she asked.

"Yes, yes!" I shouted.

"But they couldn't have stung you. I was looking at them all the time!" she shouted back. "You hit a sea urchin. Take off your mask and look."

I pushed up my mask and looked at my shoulder. Three black spines were half buried there. Sea urchin spines! I didn't think I would ever be happy to see urchin spines sticking in my skin, but this was one time I was overjoyed. Patty reassured me she had been watching the "pretty" fish all the time and they were very close, but did not touch me. She looked closely at my shoulder, but the only breaks in the skin were the three urchin spines. I felt a bit embarrassed at my "last few moments," but what the hell, just seeing lion fish that

(Continued on Page 58)

Personality Spotlight

BY CONNIE JOHNSON

JAKE JACOBS

CHIEF DIVER
MARINELAND OF THE PACIFIC

PEOPLE imagine that my principal worry is being eaten by one of the larger specimens, but on the day Marineland opened," Jake Jacobs, the oceanarium's chief diver, recalls, "I was more uncomfortably aware of my human audience than of the forty large sharks in the oval tank with me."

"I had a bad case of underwater stage fright," he remembered, "and when I climbed the ladder and took off the helmet, I was immediately surrounded by a crowd of people asking questions."

Jake, a soft-spoken, easy going man, was once a journeyman electrician with diving only an unfulfilled dream. Then the second war came and the important supply of Gelidium, a plain "weed," was stopped from Japan. Japanese divers off our own coast had been sent to relocation centers. Divers were badly needed to bring up the precious plant, source of a gel that is indispensable in bacteriological culture.

For the next ten years he spent most of his waking hours underwater harvesting the important weed in spite of the fact that his first hard hat dive was a painful ordeal. The complete story is told in a book on Jake's fascinating life, *Marineland Diver*, published by Dodd, Mead.

The book goes into detail on Jake's life at Marineland of the Pacific among the fish he has grown to consider friends and of the ten years prior that he spent as a hard hat diver making over two thousand dives in the full 200 pound gear. In the process he has had his share of close calls. Particularly tense is the account of the time he was buried in mud while jetting under the "Storm King," a 450-ton ship he raised from the muddy bottom of the Los Angeles outer harbor. Another time he had a near-miss with death, while diving for abalone. After his compressor stopped, he tied his life-line onto a bag of abs and climbed the line hand over hand. In the same chapter of the book, he relates the death of Bud Cattlin, attributing it to "economic pressure," a phenomenon that has killed more commercial divers than water pressure.

Seeing friends have fatal and near fatal accidents during his weed diving years and constantly fighting this economic pressure himself gradually drove Jake away from the sea in spite of his love of it. Coral diving and abalone diving filled part of his time and then he learned of a giant new aquarium being built on the shores of Palos Verdes, California.

At Marineland Jake found his life's work. Here he could live and work in direct physical contact with the creatures that had so long fascinated him.

After diving in the open sea for ten years, it might at first seem an anticlimax to be diving 'all twenty-two feet deep in Marineland.' But not to Jake who is a great lover of nature, being especially interested in life beneath the sea. Marineland gave him the opportunity to learn to know the sea's inhabitants better.

"To me the inhabitants of Marineland are not just so many specimens; each is an individual with its own characteristics. Jake is probably the only man who can claim the distinction of having been taught a trick by a porpoise.

"It was in connection with window washing that Zippy discovered that humans can be taught tricks—if a porpoise is persistent enough," Jake explains. "With an open-bottom helmet, you can't, of course, stoop over. To get close enough to the bottom to wash the lower row of windows, I have to lean sideways and steady myself by resting my left hand on the sand bottom as I wield the brush with my right hand. The first time I did this, Zippy realized at once that it was an unusual maneuver and cruised around to view the situation from all angles. Having satisfied himself that my left arm was propping me up, he swam away to get up momentum, swooped back and knocked it from under me with his hard nose. As my hand left the bottom, a handful of sand and gravel dribbled away in the water. I shooed him away, but a few minutes later I saw his reflection in the window and he approached from behind to knock by arm out from under me again. I let him do it three or four times the first day and when the windows were due for another washing several days later, he knocked my arm out from under me again. To do this became one of his regular games, although none of the other animals joined in. Sometimes he would be busy elsewhere and

(Continued on Page 31)



Bob Johnson Photos

DO IT YOURSELF . . .

ADDICT GUN

By RON CHURCH

How would you like to have a gun powerful enough to kill a 400-pound fish and yet have the accuracy and range to hit a fast moving blue fin tuna at a distance of 15 to 20 feet? Well, this can be yours for only \$15 to \$20 and a lot of spare time.

The "Addict Gun," created by and named after the San Diego "Addicts," is one of the finest big game guns in the world, especially made for fast game fish. By following these directions you too can be the proud owner of an "Addict Gun." I've always found that a person takes a special pride in using something he has built himself. This is the reason our "Addict Gun" is so intricately laminated with sometimes up to 15 separate pieces of different colored wood. However, the same purpose can be accomplished by using only one piece of wood with a groove hollowed out of the bottom for the push rod. I'm getting a little ahead of myself, so now let's go back to the beginning.

First you must decide about what size you want your gun to be. An average length of our guns is about

5 feet overall with a 4½-foot ¾-inch diameter shaft. The long heavy ¾-inch shaft gives great accuracy and penetration at long distances. The next thing to do is decide what kind of wood to use. As I mentioned earlier it is possible to use a single rod or pole made of Douglas fir such as used for a clothes closet hanger rack, or any other piece of straight wood that might be available. A great amount of strength can be added to the stock by lamination, and it also makes it easier to cut the channel on the bottom for the push rod. We use either mahogany or holly, birch or walnut and any other fine grained white wood for contrast. The reason for using a contrast of woods is strictly a matter of appearance however.

Now having selected our wood we will glue them together to form a finished stock, measuring approximately 1¼" x 1½" x 5'. The simplest way to get the wood is to go to your nearest hardwood lumber yard and tell them the exact sizes you want. They will cut the wood and mill it to exact size so that all that remains for

you to do is glue them together. A typical order would be as follows: Two pieces of mahogany ½" x 1½" x 5' and one piece of holly (or birch) ½" x 1½" x 5'. The handle can also be laminated in the same way by ordering two pieces of mahogany ½" x 6" x 15" and one holly or birch ½" x 6" x 15". After getting your wood you will need to get some good waterproof glue, not water resistant like some glue manufacturers claim. The best for the purpose we've found is "Weldwood Two Solution," a catalized glue or "Borden's" equivalent. The simplest but yet most effective way to glue it together is to first coat all gluing surfaces after notching out the center piece for the push rod then take a ball of heavy twine and start at one end and wrap diagonally around all pieces the entire length of the stock and back, pulling hard on the line tied to a post or rather solid object. Enough pressure should be applied on each wrap so that it cuts slightly into the wood. A space of about 1" should be left between the diagonal wraps. After it is completely wrapped, sight down each side, straightening it if



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Photo at left shows author Ron Church with one of the victims of the famed Addict Gun. Above is several Addict guns compared to a manufactured gun at bottom.

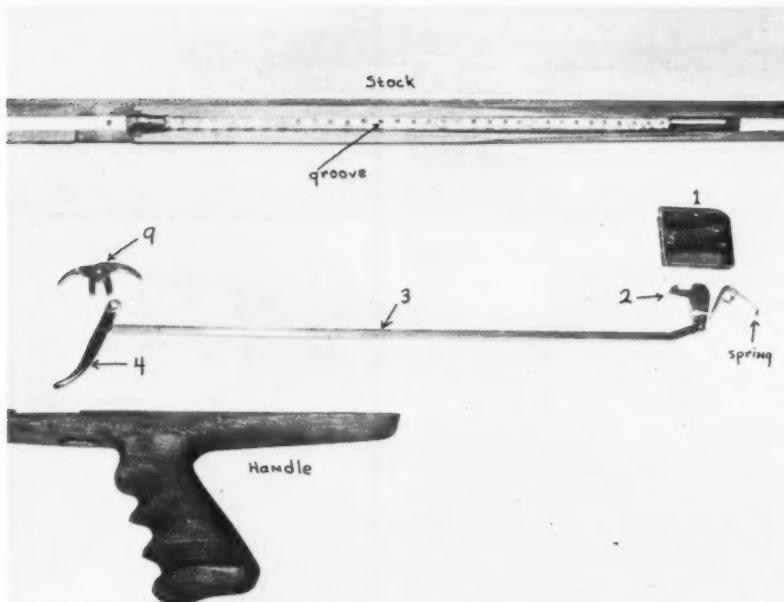


PHOTO A

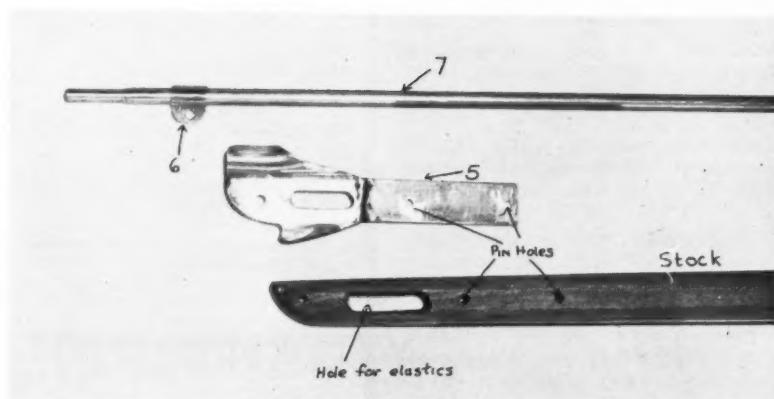


PHOTO B

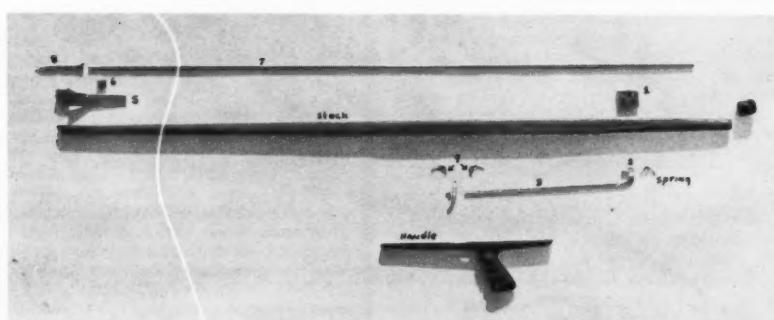


PHOTO C

necessary, then hang vertically by a string till dry. The three pieces of wood for the handle can be glued together by any conventional clamp arrangement. Now that the stock is dry, take a plane and taper the bottom edge of the muzzle tip, leaving about 1" depth at this point. The area behind the handle and below can be tapered to the butt if desired. The important things to remember are: (1) Don't taper the area where you are going to glue the handle on; (2) Don't taper the top of the barrel unless you taper it all the way; otherwise the shaft will rest on a hump in the barrel. Now taper the sides of the gun towards the front and round off the corners to suit yourself. When you have the shape you like cut the handle out with a jig saw or band saw and round it to fit your hand. We generally leave an area of about 5" in front and behind the handle to give enough gluing surface. Also a good idea is to drill a hole vertically down the handle in the center then glue and pound a hardwood dowel into it for strength. Sand the surfaces of both the stock and handle till they are fairly smooth, but do not complete the finishing job yet.

Now we are ready to make the metal parts. These parts should all be made of stainless steel, which can be purchased at surplus stores, hardware stores and steel distributors. The parts and approximate sizes are as follows:

SEE PHOTOS A, B AND C

- 1. Sear Box 1/16" by 2" by 3"
- 2. Sear 1/4" by 1 1/2" by 1 1/2"
- 3. Push Rod 1/4" by 1/4" by 18"
- 4. Trigger 3/16" by 1/2" by 3"
- 5. Muzzle 1/8" by 1" by 6" plus one piece 1/2" I.D. tubing 3/4" long welded to top
- 6. Lineslide 3/8" diameter
- 7. Shaft 3/8" diameter by 5"
- 8. Head 3/8" diameter by 6"
- 9. Line Releases....1/8" by 1 1/2" by 1 1/2"

The hardest job of all the metal parts is bending the piece of sheet metal over to make the sear box. See Figure No. 1.

The rest of the metal parts are not particularly difficult other than the physical labor involved in cutting them out and filing them to shape. After all parts are finished and fit each other, the job now is to assemble the gun. All parts should fit and be put in place before gluing the handle on. The pins that hold the sear box, trigger and muzzle in place are chrome plated brass book binders' bolts. They have a head on either end and threads in the middle, leaving a nice flat surface on either side of the

(Continued on Next Page)

Figure 1

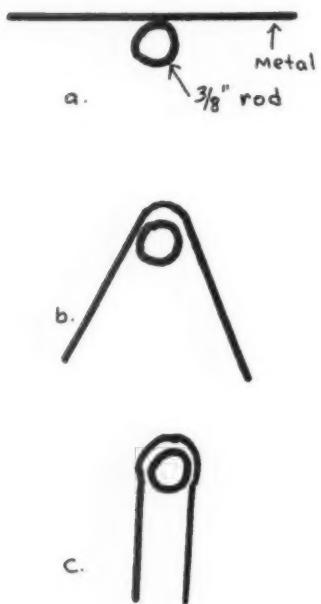
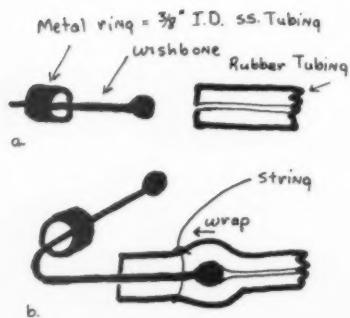


Figure 2



(Continued from Last Page)

gun. When it's all assembled and the handle glued on, file the angle or sear point of the shaft either steeper or shallower depending upon how hard the trigger is to pull. If it fires off without pulling the trigger the notch needs to be steeper, but you'll find the angles in the diagram pretty accurate. *See Figure No. 2.*

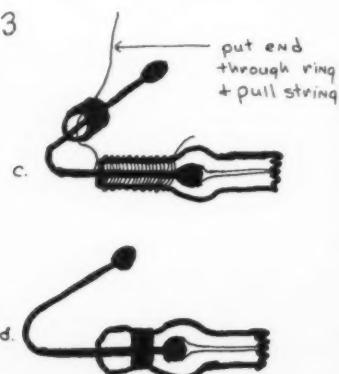
Now we've got to have some rubber for power. We use a gum rubber tubing that measures about $\frac{1}{2}$ " O.D. by $\frac{1}{16}$ " I.D. at an average length of 27" per rubber. The wish bones are made of stainless spring steel $\frac{3}{32}$ " in diameter. The ends bent over and a ball of solder melted on it. This is done by drilling a $\frac{5}{16}$ " hole into a piece of wood, inserting the tinned end of bent over wishbone and melting solder into it to form a ball; then chill to harden. After sanding the solder ball smooth, insert the ball into the end of the rubber tubing about $\frac{1}{2}$ ". Now you can fasten it permanently by wrapping it from the ball to the end of the rubber tightly. You can insert the loose end of the string through a small ring of $\frac{3}{8}$ " I.D. stainless steel tubing by pulling with sharp jerks on the string, the ring will crawl right on the rubber (*See Figure No. 3.*)

With everything completed, now finish sanding the stock, finally using very fine sandpaper. Then put a coat of sealer on, let dry and sand off again. Now a process of approximately four to six coats of good spar varnish should be applied, sanding each on lightly with fine sandpaper when dry, until the last coat.

Now you are ready for the big fish, so good luck! The one and only thing we ask is that the guns shall remain being called ADDICT GUNS. When we started making our guns they were the only ones in existence. Now they are seen everywhere.

If you still feel, after reading this article, that you cannot build one, the father of the "Addict Gun," Al Larson, is building them commercially for about \$95. *♦♦♦*

Figure 3



BOATING DIVERS

Send us suggestions to improve boats for diving... anything to make your inboard or outboard, your skiff or yacht safer, more convenient and more enjoyable for diving. Each suggestion published in *SDM* will net a two-year subscription.

Paul L. Dubé
70 Elm St. E.
Sudbury, Ontario, Canada

A flashlight clip normally used on a bicycle makes an excellent speargun holder when fastened to the bottom of the boat, particularly between tank changes and when nobody is aboard to hand you gear.

R. P. Bradley
Box 535
Beeville, Texas

A spare "O" ring or Teflon washer for tank valves can be kept on the yoke screw of the regulator in case the one in use is lost while far from a dive shop.

Roy O. Miles
3357 Iroquois Ave.
Long Beach, Calif.

To eliminate the everyday problem of stuck zippers on wet suits, dab a little petroleum jelly on the zipper. This protects the brass and makes short work of zipping up your wet suit.

Robert Murray
5248 S. Christiana
Chicago 32, Ill.

A length of rope with a large snap-type clevis at one end, which is tied to the inside of the boat and is about a foot longer than the boat's freeboard when thrown over the side, makes an excellent place to hang a tank before climbing into the boat. Once in, the tank is easily hoisted aboard with the rope.

J. G. McDonald
105a Riddell Rd.
Glendowie
Auckland, New Zealand

A rope, fastened lifeboat fashion, around the sides of a boat, affords an immediate handhold at any point on the boat and also a good place to put the feet to climb aboard. Nylon rope and screw eyes work very well.

John Demirjian
283 Bellfield Ave.
Elyria, Ohio

An ordinary distress flare bought in a boating supply store can be made to work underwater for heat and light and is a great deal less expensive than regular underwater flares. Just light it and let burn for about 20 seconds, then slowly draw it down through the surface, always keeping it vertical.

NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS

NEAL HESS, EXECUTIVE SECRETARY



NEAL HESS

RETIRING EXECUTIVE SECRETARY

Mr. Hess devoted long hours without thought to himself to develop both "Instructor's Corner" and then the National Association of Underwater Instructors which, at present, is the only national instructor certification group. His tireless efforts on behalf of better, more comprehensive instruction has raised the standard of instructors world-wide. He will continue to serve NAUI as Chairman of the Board of Directors and will continue to write for Skin Diver Magazine on more specialized instructional topics, drawing from his vast store of experience in this field.



GARRALD H. HOWLAND
EXECUTIVE SECRETARY, NAUI

The newly elected Executive Secretary for 1961-1962 is presently a Captain in the United States Air Force and a diver and instructor of long standing. Captain Howland has served on the Board of Directors of NAUI and is an instructor trainer for the Air Force. Starting in November, he will write the NAUI column in Skin Diver Magazine and be responsible for the many, varied duties that fall to the Executive Secretary of a national group. One of his first duties will be to report on the recent courses held in August and on the recent meeting of the NAUI Board of Directors.

DURING the past two years I have had the opportunity to meet many of North America's fine underwater instructors. I have been with them during the tough but fair National Association of Underwater Instructors week-long training courses; I have corresponded with them through the mail and I have visited many in their homes and have had the pleasure of meeting their families. Perhaps from this association I am capable of writing on the characteristics of a good underwater instructor.

An Underwater Instructor is a Teacher

He knows his subject well and is able to convey his message to his students. He is patient and has developed a keen insight into the behavior of humans so that he can help those who need additional practice. He enjoys lecturing, discussing and demonstrating all phases of diving and enjoys seeing his students learn by following his teachings.

An Underwater Instructor is a Student

He is always striving for perfection in his own course through study of that which others have done. He has learned to be critical in his studies so that he is able to separate fact from opinion.

An Underwater Instructor is a Scientist

He verifies that which he can with safety through his own experience. He constantly observes his own reactions as well as the reactions of others underwater so that he can report to his class and other instructors those things which have not been brought to light.

An Underwater Instructor is Curious

He is curious about all aspects of diving. He enjoys photography, or perhaps search and recovery. Maybe spearfishing and treasure hunting are his favorites. He knows equipment is a means to enter and enjoy the underwater world and is not the end.

An Underwater Instructor is Enthusiastic

He is enthusiastic about two things—his students and diving. When he tires of either, he becomes a failure.

An Underwater Instructor is a Good Citizen

He realizes the need to live with the law of the land. He consistently develops the reputation of being available to help the community in many activities when he is needed. ➤

PERSONALITY SPOTLIGHT

(Continued from Page 27)

not come around until I had almost finished with the bottom row of windows, but he never let me complete the circuit without flipping my arm out from under me at least once. It was a nuisance, but Zippy enjoyed it so much that I usually didn't mind.

One day, however, I was in a hurry because we were short of men and when I saw Zippy's reflection in the window, I beat him to the draw by lifting my hand myself and letting a big handful of sand and gravel spill into the current, just as it did when he knocked my arm out from under me. Zippy backed water and opened his mouth wide in astonishment. Apparently he couldn't see his own reflection in the window and was unable to understand how I knew he was approaching. As if to make sure it had not been an accident, he swam away to get up momentum and swooped back. When I repeated the performance with a bigger gob of sand and gravel, he swam away to get his friends. With three of them hanging in the water as an audience, he showed them the trick he had taught me."

Jake has used scuba equipment, but in his duties (training, underwater shows, etc.) at Marineland uses the open bottom helmet because it is very fast to get in and out of, which is a chief advantage for this job, done five times daily. He revealed something that may come as a surprise to most skin divers on full hard hat gear. When used by an expert, the full gear is anything but cumbersome on the bottom, actually not touching the body except at the wrists and having, when properly adjusted, almost neutral buoyancy, and helping the diver who can use the wide buoyancy variation to good advantage, rather than hindering him in his work.

He has been married twenty years and has a teenage son, John. The Jacobs live in San Pedro, on a hill overlooking both the harbor and the ocean, about six miles down the coast from Marineland, in a house decorated with many marine specimens that Jake has collected in his years of diving. ➤



Associate Editor Connie Johnson interviews Personality Spotlight Jake Jacobs after the two emerged from a dive in the main tank at Marineland of the Pacific.

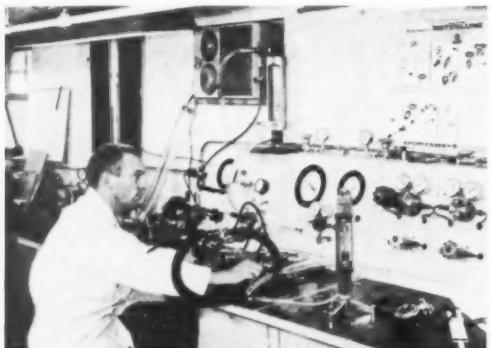
2 important reasons why dive **SPORTSWAYS** and

1

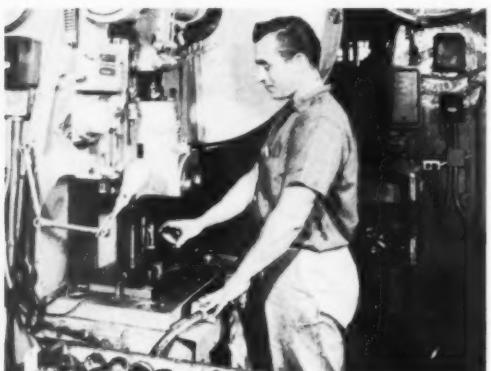
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The Home of Sportsways General Offices, Manufacturing and Assembly facilities.



Part of test equipment in Sportsways Research and Developing Laboratory—H. L. del Guidice, Research Engineer.



Stamping Waterlung Regulators on one of Sportsways many stamping presses.

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2

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TRAINED AND QUALIFIED AUTHORITIES are ready to serve you and advise you on all your equipment needs. These people are not merely salesmen, but devoted enthusiasts with a valuable background of experience to help you select your equipment.

MANY DIVING SPECIALTY SHOPS ARE OWNED BY "PROS" or employ personnel who are active divers themselves. These are the people who have elevated the diving sport to its present level of popularity. These are the people who have formed the diving clubs and are training young people to be safe, sane divers.

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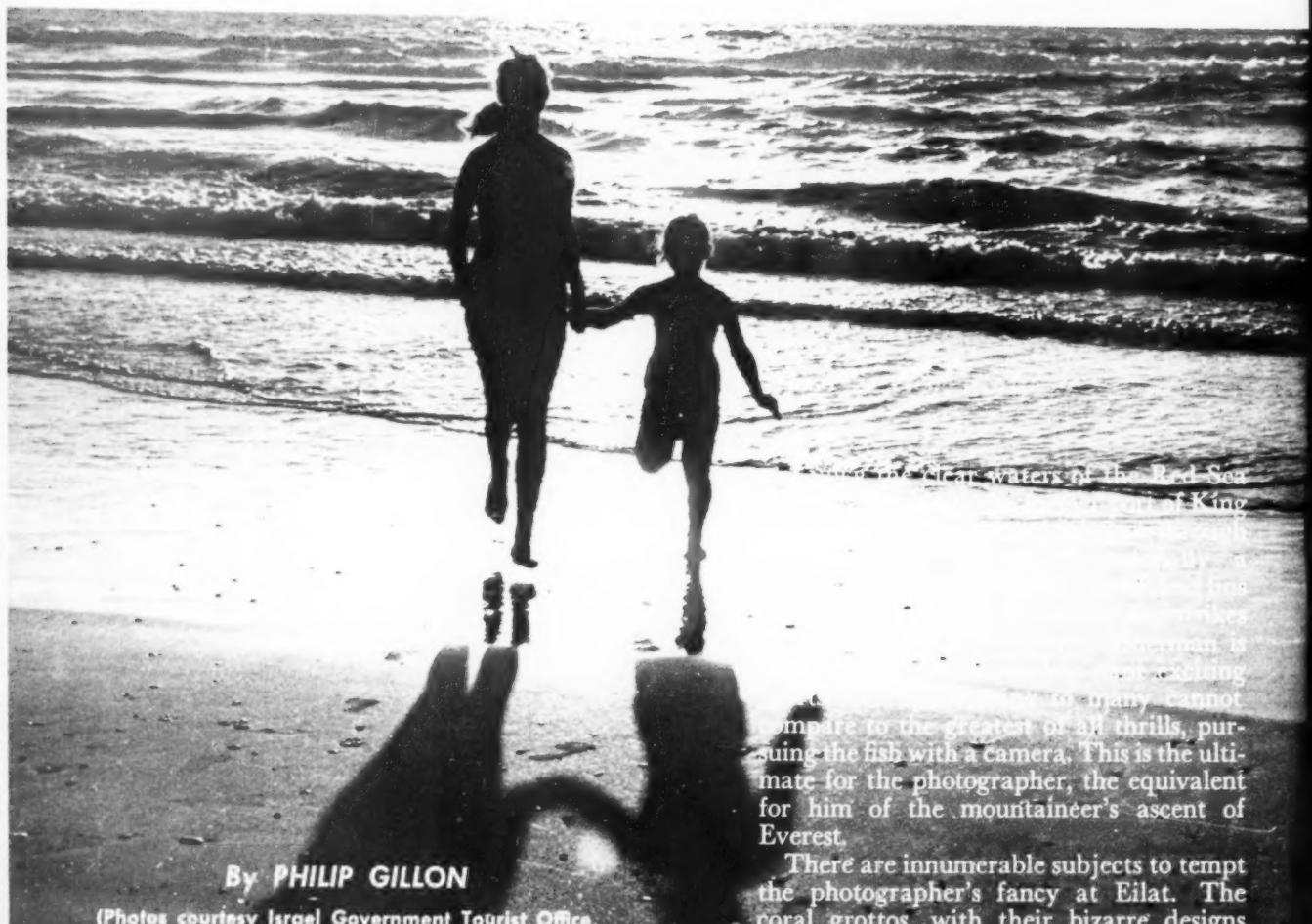
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ISRAEL UNDERWATER



...in the clear waters of the Red Sea
at Eilat, Israel. (Photo by E. King)

... compare to the greatest of all thrills, pursuing the fish with a camera. This is the ultimate for the photographer, the equivalent for him of the mountaineer's ascent of Everest.

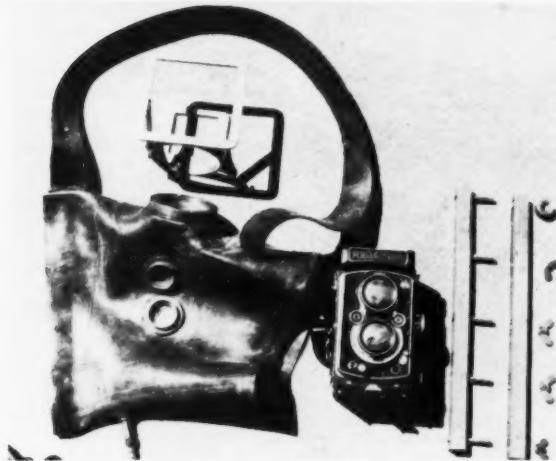
There are innumerable subjects to tempt the photographer's fancy at Eilat. The coral grottos, with their bizarre designs and changing colors, provide an almost

By PHILIP GILLON

(Photos courtesy Israel Government Tourist Office
W. Braun, photographer)







Werner Braun's ballon-like camera case made from an inner tube. The photographer triggers the shutter through the rubber and the camera floats if it is dropped.

infinite variety of shots. The tropical fish, with their outlandish shapes and bold color schemes surpassing the wildest ideas of modern artists, seem to enjoy posing for the camera almost as if they were Hollywood starlets.

Hidden among the corals are coy anemones, sea eggs, sea weeds and starfish. Sometimes a hunter dives past and harpoons a fish, providing a superb action photograph.

Eilat is the closest point to Europe where it is possible to find such tropical fauna and flora to delight the photographer. It is also one of the few places in the world where tropical fish swim through the corals a few yards from comfortable and accessible modern hotels. After a strenuous hour under the water, the exhausted



Divers examine a coral formation in the crystal clear waters of the Red Sea off the coast of Eilat, Israel, where the water temperature remains constantly comfortable.

photographer appreciates a shower, a comfortable lounge and room, and a long cool drink.

In winter especially, when beaches elsewhere are too cool for comfort, the Eilat shore is constantly warm and dry. The lowest temperature of both the air and the water is an average 71°F. in January. Rain in Eilat is something unknown or so rare as to be a natural curiosity.

According to Werner Braun, an Israeli photographer who became obsessed with the passion to photograph ten feet or more below the surface of the sea, the requisites for underwater photography are surprisingly simple. Some people use elaborate and expensive apparatus, but Braun

(Continued on Page 54)



Spearfishing in the Red Sea brings the diver against new and unusual fish in the clear, warm water.



This young citizen of Israel shows the pure elation of a dive off the newest, oldest country in the world.

DRIFTWOOD

Please address all notes, letters and stuff to:

"DRIFTWOOD"
Skin Diver Magazine
Lynwood, California

"Men talk about little things and great things, as if they knew which were little and which were great."

—Robert Louis Stevenson

Hello, anybody . . .

I don't know what it's like where you are, but, here, October is coming ashore. Summer has fled the sunlight, weakening it. The wind off the sea carries a hint of a chill. And up and down the beach, the sandpipers huddle together just a little closer. I've varnished the old jetty with several coats of fortitude and, yesterday, I watched a flotilla of whales making their way southward with unhurried dignity. It could be lonely, out here, this winter so I'll make an extra generous pot of coffee while you get busy and haul aboard all these nervous creatures threshing around in the shallows . . .

Just finished perusing the efforts of my favorite (whatever it is you are) and your little collection of epistles—from which I have gleaned the greatest idea, perhaps, since canned beer. From long, long addiction to your column I've discovered there are a large number of individualistic divers, non-club joiners and anti-togetherness-ists (it's my own ruddy word so don't tell me it's spelled wrong). With this great group probably out-numbering club members, P.T.A. devotees and teenage women divers, we should do something about it. Naturally, being nonconformists, we must do something completely unexpected and unorthodox—and what could be more unexpected and unorthodox than forming a nonconformistic, non-club joiners' club? We might plaster our gear with blank club-patches, drift to the beach alone at unarranged times and not hold meetings every Thursday night. Once each year (on different dates, naturally) we might hold unpublicized National Get-Aparts at our individually favorite diving spots—uncluttered by beer cans and baby diapers, and peacefully contemplate the contented glop of urchins.

ROBERT M. HENDERSON, YNI, USN
USS Van Voorhis (DE 1028)
c/o Fleet Post Office
New York, New York

Anyone for The Un-Diving Society Of America?

I'm probably the only successful woman beachcomber on the California coast. I'm thirty-two years old, I'm built like a young girl and I've got more energy and courage than most men display. Yet, I'm no bum and I work hard at being a fulltime beachcomber. Contrary to the ignorant public's opinion, beachcombing is not a life of ease and indolence—if you have any self-respect. You impress me as being the kind of guy who might understand my biggest problem. I'm lonely, but I sure don't want to get involved with the kind of guys who would take advantage of my realistic attitudes and my unconventional ideas since the coast is loaded with a lot of real nogoods and emotional moochers who aren't worth the powder to blow them to Kingdom Come. What I think I need is a mature fellow who knows something about fulltime beachcombing and whose philosophy of living (like taking a dim view of suburban life) matches mine. Marriage wouldn't necessarily enter into it, but I can't kid myself any longer: I'm *lonely*! Will you please withhold my address until you hear from a guy who, in your opinion, might be what I'm hoping to see down the beach?

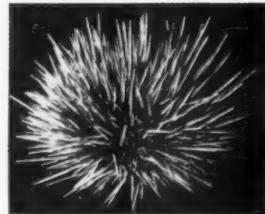
ANNA SETINSKY
Somewhere On The
California Coast

Anna, I'm keeping both eyes open.

I'm with you on your views on teenage diving, militant clubsters, well-adjusted members of society and women "tag-alongs" for diving trips. Taking a woman along can be fun, but not every-time. I'm also against those characters whose total vocabulary consists of: "cool cats," "Dig me?" and "Crazy!" They ought to read something to improve their vocabularies—like Freud. I would like to sympathize with the "self-respecting fisherman from Ft. Lauderdale" (August SDM), but when I think of their total haul of fish as composed to divers—well, "rave on children." Keep up the good work.

BOB STRAWN
St. Petersburg, Florida

To hell with the fisherman, I wanna know where I can get this dictionary by Freud.



ODE TO A SEA URCHIN
O pin cushion of the briny
Why are you so sharp and
spiny?

When I sit while scuba divin
I often find it quite surprisin.
When I go ashore thereafter
I often think I hear your
laughter.

But I'll come back to the sea
and give you another try at me.

J. McSHUTTER
No. 11 39th Place
Long Beach, Calif.

THE CASE FOR THE LURCHIN' URCHIN

This watery world is full of pipples
Who address their letters to Reader's Ripples,
(And it isn't enough that I'm loaded with chores,
Unstuffing shirts and flattening bores),
But now I'm faced with the additional clutter
Created through the courtesy of one J. McShutter,
Whose untimely mention of Urchins in rhyme
Induced Ross R. Olney to take the time,
To order me to join the act
Which brings me down (and that's a fact),
But having the patience with which to find
A singular statement in my mind,
I'll simply declare (taking it right from the top)
That all this Urchin Glop must stop.

Really, I'm ashamed of you! How the hell did that Cordell jerk wind-up on the white list? Since when have you started putting deadwood in *Driftwood*? Somebody ought to stick him with a fishing-pole! By the way, I can line-up some good ones anytime you feel like saving Mermaids!

BOB STARLING
Orlando, Florida

Who's interested in *GOOD* Mermaids? Now, if you happen to know of any naughty little . . .

I don't care if you are fat, married and getting greyhair in your beard: You're my kind of screwball and, honey, I'll swing under the sea-surge anytime with you! Is it a date?

ELAINE CULL
San Pedro, California

Sorry, when my wife gets tired of me—I'm already promised to Louise McDougall.

You guys can just cancel your plans to swim to Okinawa to find them nude, Japanese pearl-divers (female types) mentioned in the June *Driftwood*. All you have to do is let me in on where they're hiding (I've been diving in, on, around, about and under this hunk of coral for over fifteen months now and ain't seen hide nor hair of them) and I'll be your personal representative.

GARY DOTSON
51 FMS APO 235
San Francisco, California

Nice of you to offer, Dotson, but there's *SOME* things a guy just has to do for himself.

I got nothing against gals, but I think Trudi Eckhardt (August *Driftwood*) hit the nail right on the head. How about calling for a vote from the gang?

RALPH MILLER
Colton, California

So what's to vote?

Where are all the female divers in Sheepshead Bay and Gerritsen Beach diving, anyway? Girls, where art thou? I am a lonely, 26-year-old who can't find another lonesome diver anywhere—either up, down or under the water. I'm sinking fast and I need a buddy badly! Help!

MARGARET SCHUTZ
3156 Avenue "W"
Brooklyn 29, New York
(Gerritsen Beach)

Okay, you guys—on your marks, get set . . .

I'm 15 years old and itching to go diving. I'm fully equipped and will dive in any kind of weather and in any kind of water but I am having difficulty finding someone to dive with. Would it be possible to drop a line in your column asking for a scuba diving partner.

JOHN E. MANN
64 Oak Street
Harrison, New York

It would—and never say I didn't do nothing for a teenager.



MEET MISS OCTOBER . . .

Starting as of Now, this wretched corner of wet opinion and sandy dissension will choose a different beauty for each month of the year—to be lauded, leched-after and totally appreciated. Miss October happens to be **ELIZABETH McRAE**, a gifted young actress who is not adverse to the water. Photo by (oh, heh-heh-heh!) Retired Romeo, Don Morrison. If you have a living doll whose photo you care to submit, add a few bits of information about the little darling—and, perhaps, Olney and I can join forces to sell the tightwad publishers of this gung-ho journal on the delightful idea of providing a nice gift of some kind for each month's selectee. Thought I was going to give up trying to get gorgeous girls on this page, didn't you?

I hate to bother you with my personal problems but I need help badly. This Conformist Group to end all Conformist Groups is hot to get me. I'm wondering if I can seek sanctuary on your jetty until these khaki-clad characters go away. Otherwise, in two years I might forget how to swim.

PAUL BEAUDOIN
Santa Ana, California

Look, kiddo, you'll be all right as long as you just don't step forward and volunteer for anything.

A Carl Kohler puts cartoons of your style in a leading electronics magazine. I'll bet you are he.

ALEX HAUZER
Chicago, Illinois

And I'll wager you're right.

I have a problem. (Doesn't everybody, sweets?) I'm nineteen years old, a blonde with Kelly-green eyes and my measurements are 37-23-36½. (Ummmmmmmm!) But no one wants to go diving with me. (You're kidding!) And this is all your fault. (Go ahead, I'm listening.) If you hadn't been such an Anti-girl diver, I might be surrounded with men wanting to dive with me. Now I'm high and dry with no one to dive with. Oh, Kohler, I'm so mad at every inch of you! Grrrrrr! (Yeh, you're right, sweets: I'm a rank creep.)

MARILYN MORSE
26 Rose Road
Westfield, Massachusetts

Okay, I repeat: Get on your marks, fellas, and get set and—**OLNEY, GET OFF THAT STARTING-LINE AND TAKE GAFFNEY WITH YOU!**

Kohler, I'm beginning to suspect that you are faking it right down the line. For instance: Every one of your columns is filled with comment about you, observations by you and just about everything except diving and spearfishing talk. I'm willing to bet you know nothing about skin diving. And I'm going to attempt pinning you down. What, exactly, can you tell me about Sea Bass?

JACK NORDHOLL
Seattle, Washington

Uh . . . well, it's a fish and . . . uh . . . it swims and . . . uh . . .

I would like to make some remarks In the August issue, I read a letter from Mrs. Trudi Eckhard about wives coming along diving trip with their husbands. I am, and my husband, come from Germany, five-years ago with our children. My husband took up diving about a year ago. I don't know much about this sport but I know one thing: my husband wouldn't go without us, the kids and myself. Sunday is our day and we enjoy it together. I hope Mrs. Eckhard is reading this letter.

MRS. KURT SCHREIBER
San Rafael, California

Ach! Das ist nicht gut, Frau Schreiber. Tsk, tsk.

I'm one of those little monsters (age 18) that you mentioned in a recent *Driftwood* column. It was the first invasion I had ever made into your wacky world and it was, as much as I hate to admit it, great fun. Being what I am (a teenager), I must offer a rebuttal to those unkind statements about us. If your friends in the column carry the attitude displayed in their letters with them underwater, I would not want to be in the same ocean with them when they go diving. If they dive the way they write, then I'll argue with them until my air runs out that the teenagers I dive with are more sensible than those let's-wipe-out-all-teenagers friends of yours. I hope there are no hard feelings generated by this letter between "old" divers and the younger set—and as soon as I turn 20, I'll resume reading your column diligently.

JIM BRANDT
Dunedin, Florida

You needn't wait that long. You sound pretty mature to me and I'm making you an Honorary Adult. Of course, you realize you'll be expected to become considerably more neurotic than you are at present.

Regarding the bit of "tripe" you received from one Thomas Cordell: The poor, misguided creature. Obviously, he must think that he—and thousands of other line-fishermen—OWN the waters. Of course, he wouldn't be interested in learning that skin divers actually take far less fish than do thousands of line-fishermen. Personally, I do no spearfishing, but, as a qualified diver, it irritates me no-end to hear these "righteous" line-fishers mouth off with no logic or good reason. We "terrible" divers are the first ones asked, by Thomas and his clan, to go into action when there is any recovery or underwater salvage work to be done. It's Thomas' kind who cause so much unfair legislation against us skin divers.

HAL WOLFE
Chicago, Illinois

Feel better, buddy?

Kohler, I have a simple question. How in hell do you manage to restrain yourself (and I assume you do restrain yourself) when some of these sexy, bold dolls come right out and practically proposition you in public? Frankly, I can't imagine how you find the strength to treat them as casually as you apparently do. I know I could never ignore the kind of offers you've been getting, from time to time, during the four years I've been the *Driftwood* column. How do you do it, man?

WILLARD BETTS
San Diego, California

Well, confidentially, it's all them lousy, cold showers that does the trick.

I have, recently, had the good fortune to join a teenage diving club. We're planning a spearfishing expedition to the Arctic Ocean—and our child-brides are coming with us, of course. Although most of us have been diving for the better part of a whole month, there are still a few things we don't know: (1) Will we need wet-suits? (2) What is the record for Killer Whales taken with a double-arsebalet? (3) What is the depth-record for pregnant, teenage girls? (4) Would a series of Arctic Star Mops constitute a scientific operation, and (5) What can we do to interest Eskimos in the skin diving sport?

BILL BENSON
Forest Hills, New York

Teenagers—yeh, it figures.

Kohler, I paid a fancy price for this snorkel I bought, and it keeps developing leaks. Can you advise me what to do with a leaking snorkel? I can't afford to get another one right away.

GEORGE HASKELL
Brownsville, Texas

Sure, I can: write at great length to Mel Fisher.

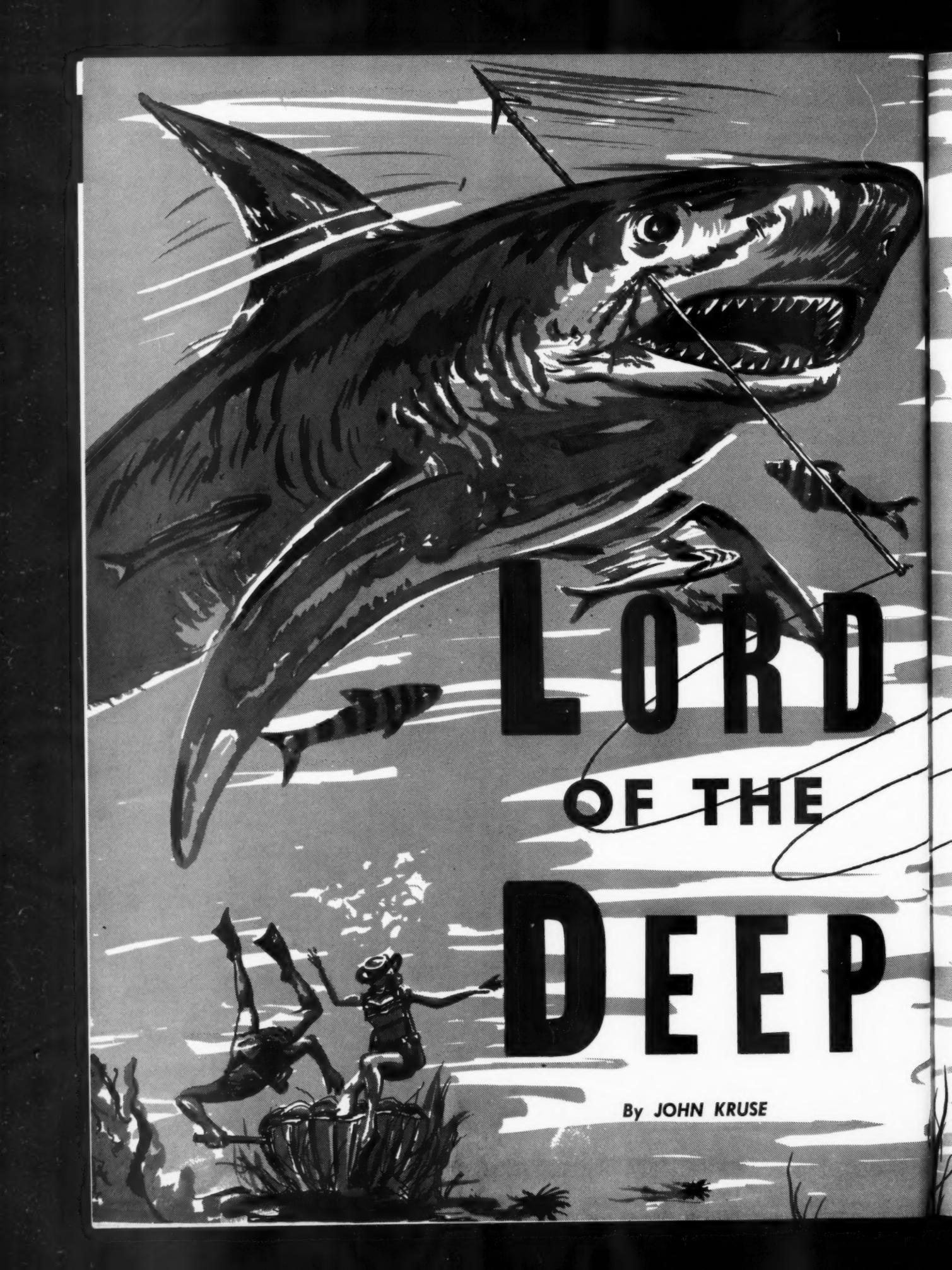
In answer to your question (August SDM): He offered to do so many grand things for me that my husband ordered me to turn-off his air supply. Not that I always take orders, you understand, but this friend was Treasurer of *The Pemmican*, and it was just before Payday . . .

MONICA REGAN
Savannah, Georgia

Excuses, nothing but excuses.

... and I guess that takes care of this month's catch. Even if the skies turn leaden and the winter winds bitterly moan across the dunes, I trust you will remember I'm sitting out here and take the trouble to fight your way through the storm in order to bring a little dismay and suspicion to the old jetty. The coffee may not be very hot by then, but you can rest assured it will never be weak. Until you get here, then, Sholem Alechem and all that type talk.

KARL KOHLER, *Kelpie*



LORD OF THE DEEP

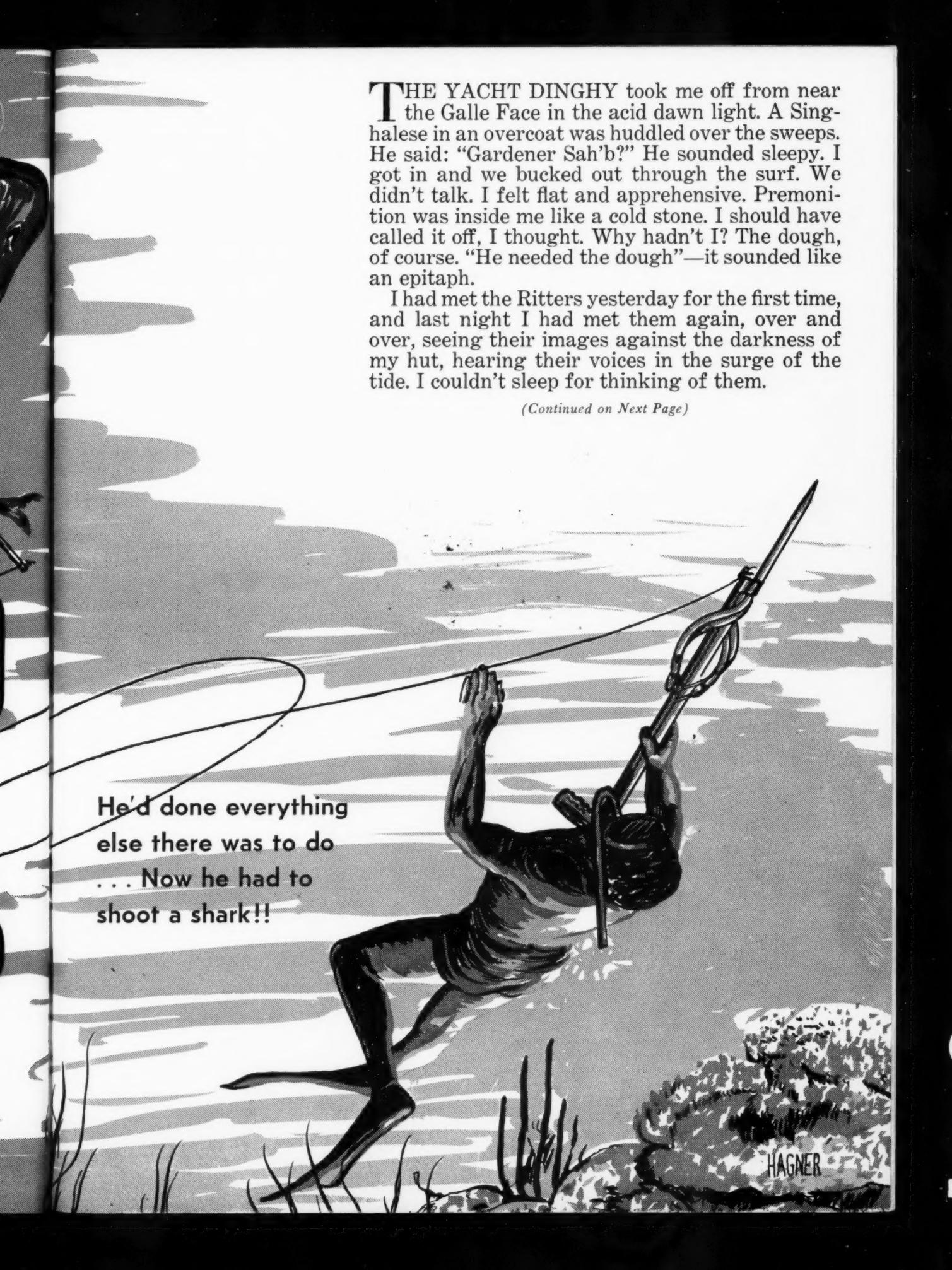
By JOHN KRUSE

THE YACHT DINGHY took me off from near the Galle Face in the acid dawn light. A Singhalese in an overcoat was huddled over the sweeps. He said: "Gardener Sah'b?" He sounded sleepy. I got in and we bucked out through the surf. We didn't talk. I felt flat and apprehensive. Premonition was inside me like a cold stone. I should have called it off, I thought. Why hadn't I? The dough, of course. "He needed the dough"—it sounded like an epitaph.

I had met the Ritters yesterday for the first time, and last night I had met them again, over and over, seeing their images against the darkness of my hut, hearing their voices in the surge of the tide. I couldn't sleep for thinking of them.

(Continued on Next Page)

He'd done everything
else there was to do
... Now he had to
shoot a shark!!



HAGNER

(Continued from Last Page)

The card had come to me by a barefooted Singhalese waiter from the hotel. It was an expensive card and I had gone up there and found they were expensive people. They were sitting on the terrace sipping highballs and gazing out across the broad expanse of the Indian Ocean.

"Ah, Gardener," Duke Ritter had said, tilting his head back.

He was young, with a shiny red-tanned face and fair hair cropped close. His wife observed me without smiling. She was very striking—long and motionless, with Spanish coloring. But right away, looking from one to the other like that, I knew they had been having a row.

Ritter got straight to the point. He wanted to do some spearfishing. He was looking for a man who knew the reefs. He had heard in the hotel that I made a living spearing fish, and so he had sent for me.

I made a polite noise; let him talk on for a bit. He didn't need any encouragement.

They had the diesel yacht, he said, anchored off the Galle Face. Put in yesterday afternoon. They were headed home for Los Angeles, the hard way from Oran. Tough trip. He stuck his nice clean-cut jaw out to show me how tough it was.

He had heard about the spearfishing in Ceylon and now they were here he wanted to give it a try. Was I free for a couple of weeks? He'd pay me thirty-five dollars a day.

It was what I made in four good days' spearing. I asked him if that included equipment.

"Hell," Ritter said. "Do we look like beginners? We've spearfished every sea from here to the Med."

"We're terribly tough," his wife said. She spoke so quietly that for a second I didn't realize that she was needling him. Then I knew that I had been right about the row and it was still on and I was in it.

Ritter went very red and when he spoke again it was as though someone were standing on his stomach. Where were the best places to go, he wanted to know. I told him it depended on what he was after.

A queer look came into his eyes, part guilt, part anger. When he spoke, his voice was unnecessarily loud: "I want to shoot big shark!"

"Shark!" I said. "Using a buoy or a boat?"

"Neither."

"They're too heavy for a man to handle in the water; you've got no leverage. You don't play them, they play you. It's just a question of who survives."

Ritter fixed me with his hot eye. "That's exactly the way I want it," he said, and by the way he said it I knew that what he really wanted was to settle something about himself.

His wife started on him then and said a lot of things I had no business to hear. She said her whole life consisted of tearing around watching him trying to prove himself: tuna, lion shooting, mountain climbing. . . . And what was he trying to prove? That he wasn't a playboy living on his wife's money? She was glad he'd finally got this crazy idea because it was too big even for him and now he was going to get burned and maybe that would cure him.

It was too much for me. I got up to go. Duke got up and planted himself in my way. His lips were turned in and his eyes bored into mine desperately, as though that were the only way he could shut out the sound of his wife's voice.

"Where are the best places for shark?" he demanded.

"The south coast, Kuaka. But you can count me out. I don't—"

"I'll raise that to fifty dollars a day," he said. "How far is this place?"

"A couple of hundred miles."

"Good. I'll have you picked up from near the Galle Face at dawn. OK?"

What could I say? I remembered the new underwater gun the Australian Airways navigator had told me was selling in Sydney—and spent a tossing, sleepless night.

We were alongside the yacht, with Ritter's muscular hand yanking me aboard. He was wearing a yachting cap and his breath smelled of rum.

"Ship the dinghy," he told the man and moved forward into the wheelhouse.

Presently what felt like triple diesels started up underfoot. I saw Mrs. Ritter then, and said good morning to her, dumped my gear on deck, and clambered on top of the saloon to help the man swing the dinghy aboard.

Then we were away. The sun came up like a bonfire behind the palms, veining the water with blood. We pulled out to sea with a snarling roar that must have awakened the whole of Colombo.

Presently Ritter hailed me from the wheelhouse and I went in and stood with him.

He was steering with his legs planted wide and his jaw up. There was something suicidal about him. An open flask leaned on the shelf behind him. He shouted to drown the engines:

"What do you think of her, hey?"

"Fine," I said. "She's fast."

"You bet your sweet life she's fast! Belonged to a smuggler. Bought her in Oran off the authorities after they'd jailed him. Drink?"

"Don't use it, thanks."

Ritter took a pull from the flask, wiped his lips. "Heard yesterday evening that you've speared a lot of sharks. You didn't tell me."

"You didn't ask me."

"What's so crazy about me wanting to, then?"

"Anyone's crazy who wants to fight sharks for the hell of it. I do it for a living and all I shoot are whitefins—hundred-pounders."

"They told me you killed big ones."

"Only when I have to," I said, remembering a few things.

"But you don't think I could, huh?"

I shrugged. "It depends on a great many things: what kind of shot you are; what kind of gun you use; what sort of shark you run into. Blackfins are pretty nervous, but blues are quick and savage. Tigers are easily the worst of the lot."

Ritter's hand tightened on the throttle so that the engine roared emphasis to his words: "I want a tiger!"

I snatched a look at him. He was serious, too serious. I suddenly wanted to say, *Now look here, you're a nice fella. . . .* It must have shown in my face because he jerked his head up angrily.

"I don't know what's the matter with you people. You're all alike. You think that because you specialize in something you're the only ones who could do it. I rowed for an Olympic team. I can box, wrestle and lift a hundred and fifty-pounds with one hand. And when I say I want to kill shark, I want to kill shark, and no one's going to stop me! I'll pay you four hundred dollars danger money for every tiger I shoot."

"Save your money," I told him. "You'll get your tiger. I personally will see to it."

"Good," he said, calmer. "Now we've got that straight, let's have some coffee." He called for the Singhalese seaman to take over the helm and strode ahead of me down to the saloon.

I tried to figure him out. Attack, attack . . . I'm as good as you are; I'll prove it. The old inferiority complex. I supposed living on his wife's money could make a man feel that way, make him want to prove himself. Well, if

proof of himself was what Ritter wanted, I thought grimly, he would probably get it.

Mrs. Ritter was in the saloon thumbing through a pile of fashion magazines. She made coffee with loose-limbed movements as though she didn't much care for what she was doing, and the three of us sat around a table and drank it.

Ritter couldn't keep off his obsession for five minutes. He lifted up one of the locker seats and showed me their equipment. They had masks, shatter-proof face plates, a twin-cylinder lung, leaded belts, fins and a pair of guns.

I lifted out one of the guns and examined it. It was of Italian make, very modern, with a forearm grip and a harpoon head fitted with the latest "cutlass" carbon steel blade.

"It's fine," I said. "But it's no good."

Ritter looked at me quickly. "What do you mean, no good?"

"Nylon," I said. "It's strong, but not that strong. And it snags in coral. Haven't you any heavier line?"

"No."

"Where are your bayonets?"

Ritter looked blank.

"You need a bayonet for shark. How else are you going to hold them off?"

There was a chuckle behind us. Duke stiffened. "They have to be all right!" he said fiercely. "Can't we make a double line out of the two?"

"Out of the two," I said, "you couldn't make a bootlace."

Mrs. Ritter chuckled again.

"Oh, God," Ritter moaned.

I hadn't the heart to keep at it. "Look," I said. "I've got a heavy speargun on deck with steel line, bayonet, everything you need. You can borrow mine if you want to."

He looked relieved. "Thanks, Gardener. I guess you think I'm pretty green."

"We can't all be specialists," I said.

An hour before sundown we came in sight of Kuaka. The tide was down and the sea moved creamy against the wide, jagged curve of the reef. Inshore of the reef the water was dragon-toothed with coral.

"Hell!" Ritter shouted from the wheelhouse. "You've picked a fine spot."

"Cut down to one engine," I told him. "I'll guide you through."

I got forward and took him in by hand signal, watching the color of the water. The deep purple patches were coral; the aquamarine, white sand. We crawled in until we reached the lagoon I knew from two summers back.

We dropped anchor. The clanking echo surged away, leaving us in a widening circle of silence.

I paused up forward, remembering the place. It was good to be back. A deer barked inland. A big iguana wagged up out of the water, shuddering the bushes. This was my sort of country, I thought, where I found what I wanted without ever quite knowing what that was. A kind of listening maybe, a heartbeat—my own. Maybe that was it—hearing the beat of one's own heart striking like a drum against the silence. The cool undersea, with the creak of pressure in one's ears and cool shapes weaving. That was it, I thought, watching the sun glaring and struggling behind the isthmus trees; just that.

We ate and turned in early that night.

Next morning at birdsong I woke the Ritters. We piled the gear into the dinghy and the boatman rowed us out of the reef. I was surprised that Mrs. Ritter had bothered to turn out. She sat facing me, wearing a bathrobe which parted over her long, honey-tanned legs. Her

lips were unpainted and her hair was still untidy from bed.

Duke was like an exposed nerve-end, bursting to get into the sea. He sat facing forward with the big gun cocked and his mask pushed up helmet-wise on his forehead.

When we got to the reef we stripped to our swim suits and put on our masks. Ritter thumbed the snorkel mouthpiece against his teeth and went in.

Mrs. Ritter picked up one of the Italian guns. "Stick close to me," I said. "If and when we run into the big stuff, get back to the boat quickly."

She didn't say anything, just looked at me through her mask. The boat rocked and she was gone. I told the boatman to follow us along and went in after her.

The dawn redness died to dusk, like a switched-out light. A host of butterfly fish fluttered in my face and vanished. The woman's fins wove a pattern before me as she spiraled down palely through the early half-colors.

Ritter was ahead of us, exploring. He moved powerfully through the water with the gun probing ahead of him like a radar proboscis. He had balance, I noticed. His fin movements were smooth and he saved his arms for the gun. He was good, I thought. He had to be good. It would have killed him not to be good.

We surfaced for air. Ritter spat out his mouthpiece.

"Say!" he panted. "The place is stinking with fish. Absolutely stinking!"

"We're here just the right time," I said. "If you like, I'll take you around the reef so you can get the layout. Don't rush into anything till you've tried out the gun, though. The spear is solid steel; you may find you shoot low with it."

"Sure." He tamped back his mouthpiece.

"Keep your hands off the coral. Lot of stonefish here!"

He nodded and sank until only the tip of his snorkel tube showed above the water.

I pulled ahead of him and guided them along the reef, keeping them well clear of the treacherous cavities in the coral teeth, where one can so easily be sucked and buffeted by the tide, swimming with a ceaseless searching movement of the head. Attack could come instantaneously from anywhere and in silence. These were dangerous waters. I felt naked without my gun.

As the sun rose, it searchlighted the undersea, firing it to turquoise. The fishes flushed into full brilliance. The coral dawned purple and ochre and mauve. Probing down through the outcrops, gliding like shadows across the glittering treasures of dead oyster beds, we followed the reef, watching shark shapes in the sunlight.

Crazy, I thought, the pressure creaking in my sinus like the splitting of Arctic ice. We were crazy to bring the girl. What kind of madness possessed me to take on this thing? The madness of air and voices and of hard-sounding paper in a world that was no longer real. I grasped the water in soft, silent handfuls and flew, cursing myself, through the coral branches.

A cloud of tiny chaetodons started up out of the trees, confusing me with their colors. There was a sudden grating sound in the water. The gun! I swept them away with my hand in time to see a big thirty-pound barracuda rocket upward like a pheasant from the coral, a bright arc of steel snaking out behind it. The arc tautened. I saw Ritter springing towards it, winding in the line. The barracuda hauled off, drawing him after it, and they veered away, twisting and struggling among the coral.

We went after them and watched. Ritter had a lot of style. He was fast and clean and every movement he made was upwards so that he had the barracuda at the

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surface inside of five minutes, with a short enough line to grab the harpoon.

The long, carnivorous fish had a lot more fight in him yet, but Ritter didn't use the bayonet; just to show us, I suppose. Holding the fish with the harpoon right against the surface where he had no leverage, Ritter wrestled him back to the boat.

A final tremendous thrust and the silvery, cylindrical body was humping under the thwarts, with the Singhalese giggling and holding his feet out of the way.

Ritter ripped out his snorkel and gasped for breath. His face was the color of a tomato. His big muscles were up under his tan. There was a wild flare of triumph in his eyes as he looked at his wife. She remained expressionless in her mask.

The three of us scrambled into the dinghy.

"How was it?" I said.

"Terrific!" Ritter panted. "Absolutely terrific!"

He knelt on the fish while I withdrew the harpoon.

"It was a good shot," I said.

"It was a terrific shot! Right on the edge of fifteen feet. I gave it about a yard elevation. Boy, he could fight, though!"

"Imagine fifty times that weight and a hundred times that strength and you have one ten-foot shark," I said.

Ritter stared at me. Then he laughed. "Are you still trying to put me off? Why don't you go home?"

I shrugged. If that was the way he felt, let's go. I told the man to row us up to the west end of the reef.

"This time you'll have to stay in the boat," I told Mrs. Ritter. "Anything's liable to happen up there. There's a break in the reef where killer fish come through to raid the feeding grounds inside. We could run into anything, swordfish, shark; sometimes you even get sea crocodiles there from the river mouth."

"No, I'm coming down," she said. "I can look after myself. If things get too hot, I'll beat it."

"If things get too hot, it'll be too late to beat it. We may have to lie up in the coral from time to time. Any one busting up to the surface at the wrong time could be dangerous."

"Gardener's right," Ritter said. "Stay in the boat."

We had reached the spot.

The woman gazed at him. I saw she was trembling. "Duke, must you?"

Ritter heaved himself to his feet. The college-boy jaw was out. "You bought me," he said. "Try and stop me!" Clamping the snorkel between his teeth, he moved to the side of the boat.

She caught at his arm. "I don't want you to do it, Duke," she cried. "I'm scared. This thing's too dangerous. I won't let you go through with it!"

He pushed himself free of her, and dived in.

"Stop him!" the woman begged me.

"Sorry," I said. "I'd need an army."

I followed him down under the tide, and down through the changing greens and blues. He would have to find his own solution, I thought. I had no right to interfere.

The corals were superb. Brain-coral boulders piled in blood about mason-worm buttresses, interchoked with sponges and lime flowers. Outcrops towered, fluorescent cup upon cup, to mushroom like sustained atomic blooms under the luminous tide.

Presently we came to the break in the reef. It was like a great, festooned gateway with beyond it the darkness of the Indian Ocean.

A pulse of excitement began to beat in me somewhere. Through this gateway, as I had told the girl, could come anything, anything at all. I wished Ritter hadn't got my gun.

Just inside the gateway was a slowly writhing forest of twenty-foot ribbon weeds. We worked through it slowly, hoping to surprise a grouper or a giant jewfish, all the time keeping one eye on the gap in the reef.

Ten minutes passed. We had had no luck and were just settling down to watch the gateway, when I suddenly noticed a big cloud of dust drifting up behind us. We went back to investigate.

The dust was rising from a narrow clearing. At the far end of the clearing, struggling and twisting and kicking up the sand, was a human figure.

It was Mrs. Ritter! She was wearing the lung, so we couldn't see her surfacing. She must have followed us from the boat.

Cursing, we beat across to her quickly. Her foot to above the ankle was trapped inside the puckered bluish jaws of a two-foot clam.

She saw us and stopped struggling, half-lying, half-floating, waiting for us to release her. I signalled to Ritter and we surfaced.

"Damn her!" Ritter said.

"How much air is there in those canisters?"

"They've been used. Less than ten minutes."

"Got to hurry. Clams can't be forced. They're like steel traps. We'll have to kill the animal inside."

"How?"

"Spears."

We dived and started working on the clam with the two guns—Mrs. Ritter had been carrying one—ramming the harpoons inside the shell, jabbing and stirring. I felt the flesh recoil.

While we were working I kept watching the gateway. It was as well I did or I wouldn't have noticed the three brightly striped fish which presently nosed into the lagoon. I got Ritter up to the surface quick.

"Those are pilotfish," I said. "That means there's something big about, probably very big. You get your wife free; I'll stand guard with the gun."

"Oh, no you don't!" Ritter said. "This is what I came for, remember?" He started to dive.

I grabbed hold of the gun, checking him. "Don't be a fool! Be reasonable. I'm used to handling big fish. Your wife's life is at stake." I tried to twist the projector out of his hand.

"You think I can't protect her?"

"Sure—but—"

"Then let go!" His fist came up out of the water and hit me on the jaw. The blow jerked me backwards. I lost hold of the gun and he was gone.

I breathed deeply several times, and went after him.

He beat me down there and took up a position at the opposite end of the clearing against a big rock. Time was too short to start a fight. Someone had to free the woman. I went down.

She was still all right. Calmer. Trying to conserve her air, I guessed. I had just started working on the clam when she clutched my arm.

I turned in time to see a giant white shape materialize out of the darkness beyond the gateway. Its deadly-looking pointed snout was surrounded by pilotfish and the great drum of a body which followed was bearded with remora. It just seemed to keep on coming, more and more of it. To the end of its slender tail, which flared out into a big lunate caudal fin, it must have measured thirty-five feet. It was a great white shark, the most voracious man-eater in the sea.

The woman's nails scored my arm. I saw Ritter tense, gripping the gun. I didn't move a muscle.

The shark eased into the lagoon, searching the water with its eyes and hearing mechanism. The grottoes had suddenly emptied of fish. Not a movement. The monster

drifted forward again, back-paddled with its pectoral fins, paused. It seemed puzzled.

I glanced cautiously at Mrs. Ritter. Only her eyes were visible through the face plate, white-ringed with horror. With a sick-feeling start I suddenly saw what was puzzling the shark—the steady stream of bubbles rising from her outlet valve. A shark's hearing is so acute it can hear another fish flap its fins in panic from several hundred yards away.

Slowly it began to move towards us.

Ritter's hunched, breath-withholding back showed tense concentration in every muscle. Cautiously he hitched the projector bazooka-wise on to his shoulder, sighted along the harpoon and swung carefully on to his target.

He can't be going to shoot it! I thought. A fish that size was practically indestructible. Yet if it located us what alternative was there? We couldn't leave the woman. Practically any other kind of shark I could have scared away by shouting and making a commotion. But not this. No. Ritter had figured the situation right. This was the showdown.

Drawn by the mysterious vibration the shark propelled itself by little waves of its tail towards us. Its great belly brushed the tops of the weeds; it came down into them, down to within ten feet of the bottom.

There could be no doubt about it now. It was headed straight for us. Ritter swung with it all the way. You suicidal fool! I thought. Then more gently: steady, boy. Plenty of time. Sight on one eye. If he could blind it, then drop the gun, we might conceivably have a chance.

The monster glided in, straight for the rocks. My lungs were bursting already. Fifteen feet—in range now—but hold it; this thing would have a skin like an elephant. Thirteen feet—twelve—eight—six. Now shoot!

But Ritter didn't shoot. The shark came on over him and he kept on panning the gun upward. Too late, I thought, a nightmarish feeling of inevitability dilating inside of me.

It loomed above him now, filling the whole world, its whiteness refracting hazily in the salt, its saucepan eyes staring out too high to see him, its parted jaws with their file-edged teeth almost scraping the harpoon. Ritter was leaning right back, gun vertical. Petrified, I thought. Lost his nerve.

He fired! The spear jerked straight up into the underside of the head.

With a smash of its tail which shuddered the sea like a depth charge, the gigantic shark stood straight up on end. I was hurled away a dozen feet. The woman was torn clear of the shell and thrown twisting backwards.

The lagoon became a turmoil. In its Leviathan convulsions the fish churned up dense clouds of sand, obscuring itself one moment, leaping out in silhouette the next, threshing and sunfishing and snapping.

I peered through the half-darkness looking for Ritter. But he was nowhere. For a brief second, then, I saw him. He was still clinging to the gun!

It was magnificent and tragic and needless. A gesture—to whom? Himself, I suppose. Prevail or die; that was his solution. In the strange and tortured country of his soul it had reduced itself to just that.

I grabbed the woman and dragged her upwards as fast as I could go.

The Singhalese, terrified by the disturbance, helped me get her up into the boat. I gasped to him to row off, then turned to look for Ritter.

Less than fifty feet away the shark's great tail lashed up out of the sea, smashed back again, sucking the water after it. Then up came its head, tilted like a surf-boat. It began to drive straight toward me. I've never been so scared in my life as I was at that moment. My insides seemed to shrivel up and die. I gasped in a breath, intending to dive, but before I could go under, the brute slewed broadside on to me. Its wash twisted me around and for a moment I could hear the clashing of its jaws.

When I turned back it had vanished.

Silence. Fearfully. I peered beneath me, but the sun spun a milky fog in the disturbed water that was impossible to penetrate. I lifted my head and stared jerkily around.

Then I saw something floating in the water not thirty feet away. At first I thought it was the shark coming up. But it wasn't the shark. It was Ritter.

Scarcely daring to think, I started towards him. But before I had gone a yard the surface in front of me lifted like a weir and a huge white belly gleamed in the sun. It rolled over, gleamed again, went down with a drunken flap of dorsals and a whiplike caudal snap.

Its aftertow drew me forward and before I could stop myself I was right over it. I sucked in my belly and churned wildly with my fins. The next moment I was beyond it and nothing had snapped me in half. I almost bumped into Ritter. I caught hold of him. He seemed to be all in one piece, but whether he was alive or dead I couldn't tell.

Even as I caught hold of him the shark came vertically up out of the water practically beside us—straight up and out in one great hurtlingly white, crescent-writhing, sun-reaching plume of fury, the harpoon protruding like a toothpick from its brain. It crashed back almost on top of us, deluging us with spray.

Still leaping and plunging, it made for the open sea, ploughing a great weal in the water like a gunboat.

I watched it go, awestruck, for a second, my heart shuddering against the back of my throat. Then I got hold of myself, and Ritter, and began to drag him back to the boat.

It was just about all the three of us could do to get him aboard. When finally he was stretched out under the thwarts, I snatched one last look out to sea.

The shark was still visible—a white speck of foam, now, on the broad circumference of the ocean. It would die out there in the deep, I knew, taking hours, maybe days, fighting bitterly to the end.

"Hurry! He's alive!" Mrs. Ritter yelled at me.

I vaulted up into the boat and astride Ritter's back in near enough the same movement.

The first few pressures must have yielded close on a gallon. I worked on him for maybe twenty minutes, with Mrs. Ritter's breath on my neck and the Singhalese mumbling to himself behind me. Maybe he was praying, I don't know, but if he was his prayers were answered. Ritter finally groaned and opened his eyes.

I kept on squeezing till his lungs were empty of sea water. Then, as he seemed to be struggling to sit up, I propped him against one of the thwarts. He leaned there with his head back, gulping in air.

"What happened?" The words seemed to pass his lips without touching them.

"You killed it," I said.

"I—killed it?" The eyes came open. They seemed to search the sky for a moment, then wandered slowly down to his wife's. She smiled at him and nodded.

"I killed it," he whispered incredulously. "I killed it!" His teeth gleamed for an instant, but it was no more than a ghostly echo of his old exultation. His voice became thoughtful. "I—killed—it."

He said it over and over again, slowly, as if to himself. And there was something, now, in the way he said it that told me he wasn't thinking only of the shark.

His wife seemed to understand. She didn't move, just sat there smiling at him. He smiled back. They were suddenly like a couple of children smiling at each other across the desks at school.

I turned to the boatman abruptly. "Well, what are you waiting for? Get moving! *Wapas jao!*"

"*Ji, Sah'b!*" He showed about ninety-seven huge white teeth and fitted the oars into their locks.

He pulled so enthusiastically that the first stroke nearly spilled us clean over the stern. ➤



Junior . . .

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FIN FANS

by JEAN DOWD

(Would you like a diving Pen Pal? Send in your name, age and address and we'll print it in the Junior Fin Fans column. Write to: Junior Fin Fans Underwater Mailbox, c/o Skin Diver Magazine, Lynwood, California.)

IF YOU'D LIKE to have your own wet suit, and your piggy bank has lost too much weight lately, why not make an inexpensive patch-work suit? If you're the calm, hard-to-panic type, a whiz at jigsaw puzzles, and your middle name is Job, you probably won't find it too hard to do.

Dave and Harry Pierce have made comfortable suits for diving and surfing, by gluing together scraps of neoprene. After

the suit is finished, they send it out to have a zipper and snaps installed.

This ingenious pair had seen patch-work suits while diving along the Southern California coast. Before long, they had made their own pattern and began the somewhat tedious job of gluing the many small black pieces of neoprene together. The result was more than satisfactory. Total cost was under \$7.

CONTEST WINNERS WILL BE ANNOUNCED IN NOVEMBER ISSUE

Note: Complete Prize List in August issue should read, Prizes 3-13—Each one set of fins, mask and snorkel.

Dave, 16, has been diving about two years, mostly at Catalina and off Mexico, and is a member of the Divers' International in Downey. His favorite subjects in school are math, science and sports. His hobby is collecting specimens for marine aquariums which are often on exhibit at school and the Los Angeles County Fair. Dave plans to major in science when he goes to university, probably in the field of medicine.

Harry, 13, enjoys math and shop classes most. He is a born inventor and likes to experiment with electricity. He arranged a set-up so that his bedroom light goes on when he opens the door—just close the door and out goes the light. A project less popular with his parents occurred when they found, to their dismay, that everytime they opened the hall door the front doorbell rang. Our prediction is that Harry will soon be inventing all sorts of handy gadgets for the underwater world. His ambition is to manage a big electrical store.

But now, before the local pond freezes over completely, you'd better get busy on that patch-work suit:



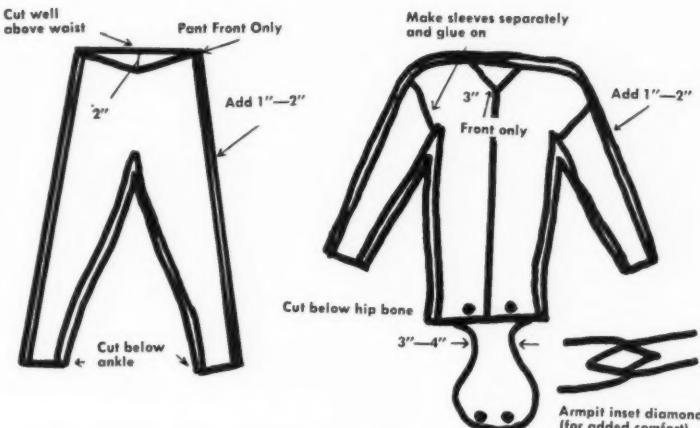
David Pierce, Harry Pierce and Mike Dowd (l to r), try out homemade wet suits off Southern California coast.



Harry and Dave Pierce lay neoprene scraps on paper pattern before gluing pieces together to form wet suit.

Photos by Ed Dowd

PATCH WORK WET SUIT



REMEMBER . . . TWO FULL PANTS AND TWO FULL COAT SECTIONS MUST BE MADE.

YOU'LL NEED:

- Two pieces of wrapping paper, each 12' long, obtainable at a meat market.
- White or yellow chalk.
- Yard stick or ruler. Chalk is taped on end to draw pattern.
- Large scissors.
- Neoprene scraps. Try buying them at local wet suit manufacturers. Cost is about \$3 for a gunny sack full. If not available in your area, write to this page.
- Two or three cans of "Black Magic" from a diving shop.

DIRECTIONS FOR PATTERN:

- Cut paper in half so that you have two six foot lengths. Overlap slightly and tape together so paper will be wide enough for suit top. Repeat this for suit pants pattern.
- Suit top:** Have person lie flat on his back with arms about 10" away from sides. Subject should be in swim suit. Mark around person with chalk, keeping stick perpendicular to paper. (Remember, chalk was to be taped to end of ruler.)
- Repeat process on second paper for suit pants. When tracing body outline, pay special attention to:
 - Bottom of coat should be 2-3" below hip joint.
 - Sleeves to come below wrist bone.
 - Top of pants, well above waist.
 - Bottom of pants below ankles.
- To complete pattern, add 1" by drawing parallel line around outside of body outline, if person is of normal weight. If person is inclined to be a little heavier than normal, add 2".
- On coat, mark shoulders as shown in drawing. Sleeves should be made separately (from the same pattern) and then glued to the coat. This gives a better fit.
- Now begin to lay scrap on the two paper pattern, like a jig-saw puzzle, cutting pieces to fit. Use large pieces first in order to have a minimum number of seams. You can glue as you go or after your pattern has been filled, whichever seems easiest to you.
- Remember, you need two full pattern cuts (the front and the back).
- Next, take pants front and mark center of waistline 2" down (see drawing). Draw line with chalk from outer tips of waistline to this point and cut out triangle. This pulls waistline tight across stomach. Do this only on pants front.

- Measure person's neck circumference at shoulder line. Now take front of coat at center of neckline and draw a straight line (using ruler) down to center of waistline at bottom. Make a cut the full length of this line. Using the neck measurement, cut a "V" out of the front with the apex at the bottom on the center line cut (see drawing). For instance, if the measurement is 10", then use a ratio of 4" across the top and 3" for the sides of the triangle.
- Now glue the major pieces together using special care to "face" the edges in order to get tight seams. It is recommended after you glue the entire suit up, you go over each seam with black magic and pinch the seams. You can also obtain rolls of neoprene reinforcing tape and glue over the seams if you wish.
- The tail of the coat can be made by putting coat on and taking a measurement from center bottom of the back, under the crotch and 3" up above the bottom of the front of coat. Using this measurement, draw a pattern as shown in illustration. This will be glued in back. Snaps will be installed later, in front.
- If you want a collar, a single piece can be cut 2" to 3" wide and glued in place. (By this time you should be an expert in piecing things together.)
- Suits are more comfortable under armpits if a diamond shaped piece is inserted to replace seam under arm. See drawing.
- Special note: remember to be generous when making your suit. It's better to grow into your suit in a hurry, than out of it.
- Take completed suit to a manufacturer in your area to have zipper and snaps installed. If this is not possible, you can mail your suit to Mr. Carol Goodat of Portland, Oregon. Although he's busy manufacturing fine custom suits for the Northwest, he has been kind enough to offer this service for children. The total cost for zipper and snaps, installed, is only \$3.50 (plus postage). Mail your suit, card with your name and address and a check or money order for \$3.50 to:

Divers' Air and Equipment Co.
4867 N.E. Union Ave.
Portland, Oregon.

By the way, watch for a new, inexpensive custom suit line for children, soon to be on the market from this company.

BE A REGISTERED JUNIOR DIVER JOIN THE NEW JUNIOR FIN FANS CLUB

By forming this new club for juniors, Skin Diver Magazine has created a news center for young divers to promote safety, answer questions, provide recognition and exchange ideas.

The membership fee of \$1.00 includes a notebook for your special diving information, the club decal and personal membership card. In return, you must agree to follow the safety rules listed on the back of your card.

Help us make a big splash for juniors everywhere! Join Junior Fin Fans Club today.

Be sure to include: your name, age, address, birthdate and a check or money order for \$1.00.

JUNIOR UNDERWATER MAILBOX
PLEASE ADDRESS ALL MAIL TO:
JUNIOR FIN FANS UNDERWATER MAIL-
BOX, SKIN DIVER MAGAZINE, LYNWOOD,
CALIF.

NEW CLUBS—MEMBERS WANTED
LONG ISLAND DIVERS
Darryl Marks, 656 Emerson St., Woodmere, N.Y.

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Ron Dreffer, 6636 Stoll Lane, Cincinnati 36, O.
I would like to join a club in the Bradenton, Florida area.

Kim Cleary, 14
208 57th Street W
Bradenton, Florida

PEN PALS

I'm interested in skin diving, surfing and I water ski. How could anyone miss with a pen pal like me?

Clarice Jones, 17
3910 Monserrate
Coral Gables 34, Fla.

Winston Reed, 16
104 Mill Street
Shelton, Conn.
Vaughan Falconer, 15
90 Donegall Drive
Toronto 17, Ont., Can.
Mike Miget, 17
1434 Myrtle Ave
Cuyahoga Falls, Ohio
Glenn Burchard, 15
Box 242
Kemah, Texas
Dennis Gaston, 10
5437 Luealla Street
Jacksonville, Fla.
John Violette
55 Androcoggin Ave.
Lewiston 7, Maine
Kim Murchie, 12
130 Canterbury Dr., N.E.
Grand Rapids 5, Mich.
Jean Grasso, 15
95 Camino Alto
Millbrae, Calif.
Jim Wilson, 11
17 Wetherell St.
Worcester 2, Mass.
Lanny Whitt, 15
1205 Oxford Rd.
Roxboro, N.C.
Louis Guy, 14
609 E. Washington St.
Thomasville, Ga.
Ken Hobbs, 16
2120 Sterling Dr.
Eugene, Oregon
Robert Le Munyon
1009 Killy Rd.
Elizabeth, N.J.
Carol Riker, 15
137 E. New St.
Lancaster, Penn.
Betsy Harrison, 13½
2310 Ferdinand Ave.
Honolulu 14, Hawaii

Milton Charno, 16
6521 West Euclid
Milwaukee 19, Wis.
Dick St. Gaudens
375 Irwin Street
San Rafael, Calif.
John Wankowski, 14
124 S. Chester St.
Baltimore 31, Maryland
Jack Lamb, 13
1 Locke Street
Andover, Mass.
Joseph Murray, 17
59 Sisson Ave.
Hartford 6, Conn.
Keith, 13 & Anita 12,
Jeffers
17920 Atkinson Ave.
Torrance, Calif.
Barry Chafin, 13
1009 W. 5th St.
Huntington 1, W. Va.
Colin Barnett, 11
3768 Northland Dr.
Los Angeles 8, Calif.
Bob Olson, 14
7708 W. Arthur Ave.
West Allis 19, Wis.
R. David Peterson, 18
90 Brookway Rd.
Roslindale, Mass.
Richard Davis, 14
Walker Hill Road
Groton, Conn.
Sharon Walding, 12
Box 74
Taleo, Texas
Tony Yates, 16
711 S.E. 19th Ave.
Deerfield Beach, Fla.
Mike Nightingale, 13
203 1st Ave. East
Coal Valley, Illinois



JUNIORS OF THE MONTH

Bob LaMotte (L) and Dan Gould like diving at Lake Little St. Germain, Wisconsin. Good examples of how to get in the swim the right way, these sixteeners enrolled in a fine course offered by Don Wagner at the Kankakee, Illinois, YMCA. They are now members of the Kankakee Aquateers.



The rules are simple. There are four periods, each eight minutes long (if you can last). Each player carries a sawed off hockey stick, with each team having different colored sticks. The puck is weighted so that it slides along the bottom easily.



You face off and the puck is dropped from the surface by a referee, who stays on the surface for many reasons, the main one being it's much safer. Once the puck hits the bottom, both teams try to drive it into fish net baskets at each end.

UNDERWATER HOCKEY

PHOTOS By BOB CAHILL

Watch the knuckles, will you? Sticks fly and bubbles boil as each team tries to gain control of the elusive puck. Watching the mayhem from above, the referee can call any fouls (shutting off air is illegal). If a player surfaces, he is penalized.

Blocking with a tank is within the rules, as is jabbing with a stick in this new rough-and-tumble underwater game, here being played by two clubs from the Hartford, Connecticut area. Results are sometimes bloody noses and skinned knuckles, but great fun.



News Current

NEWS FROM AROUND THE GLOBE COMPILED AND EDITED IN SKIN DIVER OFFICES. Local diving news from readers welcomed.

HOMESTEAD, FLORIDA—While diving in the ocean near Homestead Bay front park **Joe Lawson** of the HAFB Gators, lost his snorkel. He immediately dived to the bottom to retrieve the snorkel and while searching spotted a small metal box on the bottom. Joe picked up the box and his snorkel and headed for the surface. When he opened the box he discovered \$1,000 in checks and money orders. Upon notifying local authorities he was informed that the money had been stolen from **Bob's Cycle Shop**.

LAKE GEORGE, NEW YORK—Skin divers from four states and **Dr. Robert B. Inverarity**, director of the Adirondack Museum, have agreed to cooperate in recovering artifacts from the depths of **Lake George**. The lake was recently the site of an important historical discovery, however divers had been banned from the recovery of any of the relics until this time.

FOLKESTONE, ENGLAND—**Fred Baldasare** bobbed to the surface, ill and exhausted, after failing in his attempt to swim the English Channel underwater. He was pulled into his escort boat six miles off Folkestone after swimming sixteen of the twenty-two miles from **Calais, France**, in fourteen hours. When he surfaced he was suffering from hallucinations and double vision. Although failing to complete the channel swim, he did break two records, underwater distance and time records, both held by his wife, **Jane Baldasare**, whom he trained to be the first person to swim the Channel without breaking the surface.

FIRST AQUA-LUNG LOST IN INVASION—The device that launched the booming sport of skin diving was the self-contained underwater breathing apparatus. The first model invented in 1943 by **Capt. Jacques-Yves Cousteau** and engineer **Emil Gagnan** was used by **Cousteau**, **Frederic Dumas** and **Philippe Tailliez** near Marseille during the Facist occupation of France. To keep the vital military secret of the **Aqua-Lung** from the enemy, **Cousteau** hid it in a friend's paint factory. But the original **Aqua-Lung** was not destined to take its place in a museum. When the Allies invaded the south of France in 1944, friendly artillery sent a misdirected shot into the paint factory, destroying it and the original **Aqua-Lung** with it.

ELKHORN, WISCONSIN—Three divers, **Arthur Swanson**, **Don Chillo**, and **Louis Filip** were recently fined \$20 each while diving in nearby **Lauderdale Lakes**. The charge was 'surfacing more than 50 feet from a float.'

OGDEN, UTAH—Members of the Weber County Sheriff's Underwater Rescue Team and the Kingfish Scuba Divers Club, acting on a call from the State Highway Patrol, were successful in recovering the body of a youth who had drowned in the Echo Reservoir. Because of the near zero visibility the divers were forced to resort to rather unusual recovery methods. When contact was finally made the five divers were working in evenly spaced positions on a 12 foot lead pipe in tow behind a boat. The 15-year-old lad drowned while trying to make shore from a large innertube.

REGINA, SASKATCHEWAN—Relics of a four thousand year old civilization have been found in northern Saskatchewan, reports **F. G. Bard**, director of the Saskatchewan Museum of Natural History.

OCALA, FLORIDA—**Bill Shelton** and **Bill Vaughn** of Arlington, Virginia, while diving in Devil's Den Springs near Ocala discovered some bones. The divers took the bones to the Smithsonian for identification and have sent them to Florida for more information.

RED SEA—Snowy-haired **Henri de Monfried**, 81-year-old writer, explorer and one-time gun runner, is convinced that he can find the fabulous treasure said to have been cached there by an eighteenth century pirate named **Le Vasseur**, alias "The

Buzzard." **Le Vasseur** was hanged in 1730. **Mr. Monfried** while poking through some ancient documents on **Reunion Island** during an earlier expedition, thinks he had the clue to the missing treasure.

ORLEANS, INDIANA—Indiana State Police skin divers and nearly thirty members of the National Speleological Society spent two days attempting to rescue two Indiana University spelunkers, **Tom Arnold** and **Ralph Moreland Jr.** who were trapped in Show Farm Cave eight miles west of Orleans. The day was bright and sunny when the two experienced cave explorers entered the cave on a mapping expedition, but an unexpected downpour dumped nearly four inches of rain on the area in just a few hours causing a flash flood which completely filled the cave. Skin divers searched with no avail for large rooms, rumored to be in the cave, where the men might have escaped the rising water. The rooms did not exist. The bodies were discovered, after the water had gone down, nearly 3000 feet into the cave at 2 p.m. on July 19, three days after they entered the caves. The two men were the first members of the NSS to be killed in an accident in a cave in the twenty year history of the organization and were believed to be the first persons to die in a cave in this area since **Floyd Collins** was trapped by a rock in Sand Cave.

DETHANY BEACH, DELAWARE—Oceanographers have started probing the sea near here to learn more about the origin and behavior of mysterious sand waves along the coastline from **Cape Hatteras, N. C.**, to **New York**. The research is under the direction of **David W. Moody** of the **Geography Department of Johns Hopkins University**, Baltimore, under a \$2,000 grant, the first awarded by the **Coast and Geodetic Survey** in an expanded oceanographic research program. Skin divers and oceanographers will explore with cameras and instruments. The sand waves in the area are very broad formations rising ridge to trough in heights of ten feet or more, over half-mile intervals. Very little is known about these undulations. Some experts believe the waves may be old beaches, drowned in geologic history by a rising sea level.

CHICAGO, ILLINOIS—The use of underwater breathing apparatus and skin diving equipment, previously banned at all **Chicago** park district beaches, will be permitted in one area to be designated by the general superintendent. A park district spokesman said that an area north of the pier at **North avenue** beach is being considered.

NOME, ALASKA—Requests from skin divers for information on Alaskan gold diving possibilities are pouring into the **Department of Mines** offices. The office reports for purely prospecting purposes, claims need not be staked, but when prospecting reaches the point where production of gold begins, divers should take steps to properly locate a mining claim or lease the area. Also they are required by law to report to the **Commissioner of Fish and Game at Juneau** or to a local **State Fish and Game** office on contemplated operations before doing anything that will disturb the bottom of a stream.

DORA, ALABAMA—The **Jefferson County Volunteer Rescue and Recovery Team** has joined forces with the **Walker County Sheriff's Department** in an attempt to solve an alleged murder committed in 1953. A woman inmate of **Walker County Jail** has confessed to being part of the alleged slaying. She stated she and three male companions killed and dismembered the body of **W. D. Hyde** and placed the body in an oil drum, filled it with cement and dropped it in a creek. Divers **Lloyd Brewer** and **Bill Watson** have not as yet discovered the drum. The search is hampered by zero visibility and the rough creek bottom that is littered with stumps and logs.

(Continued on Page 60)

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SKIN DIVER—October 1961

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TARPOON SALES & SKIN DIVING CENTER 925 Palm Ave., Hialeah, Florida Mfr. of Tarpoon CO2 Spearguns Retail, Wholesale, Rentals and Repairs	\$1.25
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LAKELAND SKIN DIVING CENTER 715 Alicia Dr., Lakeland Sales, service, rentals, instruction Phone: MU 3-4244	
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SKIN DIVER'S HEADQUARTERS South of Marathon Airport Marathon, Florida Formerly Bartelt Bros.	
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MISSILE SKIN DIVING SUPPLY Box 756, Merritt Island (Cocoa Causeway) Diving Specialty Shop - Jewish Center Ringside to Cape Canaveral NE 6-3077	
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UNDERWATER SPORTS, INC. 2219 Biscayne Blvd., Miami, Florida Soap lubricated compressor—Open 7 days Retail, Wholesale, Rentals and Trips	\$0.75
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WATER WORLD, INC. 1331 Biscayne Blvd., Miami 32, Florida All services for skin divers	FR 3-7241
Hou s: Mon.-Sat. 8:30 a.m.-7:00 p.m.	\$0.75

PALM BEACH SKIN DIVERS SUPPLY 623 South Olive West Palm Beach Complete stock, air, rentals, repairs	
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GEORGIA

GEORGIA DIVERS SUPPLY, INC. Georgia's Only Aqualung Center Ph. 525-5216 319 Spring, N.W., Atlanta 8, Georgia 9 to 6 Mon.-Sat.	\$1.50
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HAWAII KAUAI SKIN DIVING & SURF CASTING CO. Box 711, Koloa, Kauai, Hawaii Phone: 746-725 Sales, Rentals, Refills	\$1.25
Visit the Garden Island's Blue Waters	

ILLINOIS AQUA HOBBY DEN 8526 S. Racine, Chicago, Ill. Phone: ST 3-0130 Hours: 9-6 Mon., Fri. 9-9; Sat. 9-4; Air-Gas Station, Sun. 8-6	
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THE DIVE-IN 1440 West Fullerton, Chicago Daily 9-9, Sun. 9-1 Rix pure air \$1.50	
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VERN'S SCUBA CENTER 3917 N. Ashland Ave. Chicago 13, Ill. Hours: 9-9	\$2.00
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ERICKSON POOL SUPPLIES, INC. 4944 W. Irving Park Rd., Chicago 41, Illinois Spring 7-6530 Hours: Mon.-Sat. 8-9; Sun. 7-12	
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SKIN & SCUBA DIVING SHOP 3853 West North Ave., Chicago, Illinois 24 hr. Service. Phones: SP 2-5164, CA 7-3765 Sales, Service, Instruction, Rentals	
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SKEET MARINE DIVING CENTER, INC. Lessons, Rentals, Sales, Service 1945 Maple Street, Evanston, Ill. UNiversity 9-9830. 24 hrs. Service	\$2.00
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UNDERSEA DIVERS SUPPLY CO. 3568 West 95th Street Evergreen Park, Illinois Eves. till 8:00; Sat. till 6:00	GA 5-0822
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NORTHWEST AQUATICS 3552 River Road Franklin Park, Illinois Sales, Service, Instruction, Rentals	678-6661
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WEST SUBURBAN DIVERS Mannheim & Roosevelt Hillside, Illinois Sales, Service, Instruction	LI 4-1660
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SKIN DIVER—October 1961	
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BOB'S CONOCO SERVICE

Half block East of Rt. 83 on U. S. 12
Mt. Prospect, Illinois
CL 5-9876

UNDERWATER SALES & SERVICE

520 East Ogden Avenue, Naperville, Illinois
Lessons—Rentals—Repairs—Air Fills
Phone Elmwood 5-3680

CENTURY SALES, INC.

315 West Ogden Avenue
Westmont, Illinois
Water Sports, Skin & Scuba Supplies WO 9-4660

INDIANA

HANSEN'S DIVERS SUPPLY

3750 Ridge Rd., Highland, Ind.
Rix-Water-Lubricated-Compressor
Hrs.: 10-6; Mon., Thur., Fri. 10-9; Sun. 9-11 a.m.

IOWA

AQUA SPORTS

Everything for the Skin Diver
4026 Jersey Ridge
Davenport, Iowa

\$1.50

KUNKELS SPORTING GOODS, INC.

309 West 2nd St.
Davenport, Iowa
Everything for Every Sport

\$1.50

MATT LEYDEN'S DIVE SHOP

720 20th Street
West Des Moines, Iowa; 5 p.m. to 10 p.m. daily;
6:30 a.m. to 10 p.m. weekends

BL 5-3712

\$1.50

KENTUCKY

TINSLEY'S GUN & MARINE

7915 Shelbyville Rd., Louisville, U.S. 60
Kentucky's Diving Headquarters
Rentals, Instruction, Service TW 6-0051

WATER WORLD, INC.

308 North Woodlawn Ave., Louisville 14, Ky.
Kentucky's Exclusive Dive Shop EM 8-3028

\$0.50

HARBUCK SPORTING GOODS, INC.

304 Texas Street
Shreveport, Louisiana
Hours: Mon.-Sat. 9 to 5

\$1.50

MAINE

UNDERSEA ENTERPRISES, INC.

69 Government St.
Kittery, Maine
Hours: When we are not diving

\$1.50

GAMMON'S PHARMACY

Complete Skin Diving Dept.: Tanks, Regulators,
Suits and Accessories; 7:30 to 9:00 p.m.
Main St., Limestone, Maine

\$2.00

CONGRESS HARDWARE & PAINT (TOMMY'S)

273 Congress St., Portland, Maine
Complete line skin diving eqpt.

SP 2-5357

Sales, service, rentals, lessons 10 fills \$10.00

MARYLAND

DIVER'S DEN

8105 Harford Road
Baltimore 14, Maryland (Parkville)
Open daily 9:30 a.m.-8:00 p.m.

NO 8-6866

NO 8-7382

MASSACHUSETTS

BELMONT BOAT COMPANY

402-404 Trapelo Road
Belmont, Massachusetts
Diver Jim's Scuba Air Station

IV 4-5246

\$1.00

NEW ENGLAND DIVERS, INC.

42 Water Street
Beverly, Massachusetts
Wholesale distributors for all major lines WA 2-6951

\$1.00

JAMES BLISS & CO., INC.

342 Atlantic Avenue
Boston 10, Massachusetts
"Sales and Service"

\$1.50

WETZELL'S SPORT & MARINE

644 Belmont St., Brockton, Mass.
Hours: 9 a.m. to 7 p.m. (except Sundays)

\$1.25

B & R SKIN DIVING SUPPLIES

OX 8-2083
29 Mechanic Street
East Milton 86, Massachusetts

\$1.25

LAKEVILLE DIVER'S SUPPLY INC.

109 Bedford St. (Rt. 18) Open 7 days
Lakeville, Mass. Middleboro 1050-W
Sales-Repairs-Rentals-Instr.

\$1.50

HIGHLAND TELEVISION CO.

70 Main St., Melrose. Complete Eapt.
Hours: 9-6 Mon., Tues., Sat., 9-9 Thurs., Fri.
Closed Wed., Sun. 5 Min. Fill \$1.00

SO-SHO-NE, INC.

246 Bridge St., Rt. 3A, N. Weymouth, Mass.
Skin Diving Outfitters & Repair Station ED 7-3186

YMCAs and NEC Certified Instruction Fill \$1.00

COLONIAL MARINE, INC.

Route #1, Norwood, Mass. NO 7-1100
(At Airport Entrance) \$1.50
Complete Line Skin Diving Equipment & Repairs

LEONARDO & SON SKIN DIVERS SUPPLY

81 South Circuit Ave.
Oak Bluffs, Massachusetts
(On the Island of Martha's Vineyard)

SOUTH SHORE SKIN DIVER

591 Washington Street Quincy Point, Massachusetts PR 3-5452
Complete Sales—Repairs \$1.00

ANDY'S AQUA SHOP

311 Bridge Street, Salem, Mass. PI 4-8813
Rentals, Sales, Instruction, Repairs Charter Boat Diving Parties Fill \$1.00

SKIN DIVING SUPPLY CO.

Route 6 and Main, Wareham, Mass. CY 5-0285
Sales, Rentals, Repairs, Instruction Wholesale Distributors

SEACRAFT INDUSTRIES, INC.

3A Church St., Wilmington NO 8-1100
Retail Sales & Service
Wholesale Distributors for all Major Lines \$1.00

DIVERS WORLD, INC.

751 Main St., Rt. 38, Winchester, Mass. PA 9-6653
Certified YMCA Instruction
"We Have Everything" Fill \$1.00

MICHIGAN

DAVE'S SCUBA SHOP

3162 Packard, Ann Arbor, Mich. NO 3-0791
Rentals \$3 per day Mon.-Fri.
9-9 Daily, including Sunday

VILLAGE SPORT & HOBBY SHOP, INC.

154 S. Woodward Ave., Birmingham, Mich. MI 4-3010
Sales—Rentals—Hydro Tests
9-6 Mon.-Sat.; 9-9 Fri.

THE AQUA SHOP

Wil-O-Paw Drive, Coloma, Michigan
Refills—Sales—Repairs—24 hrs. HO 8-4078
Everything for the Diver who does
Tested Air \$1.50

SEAWAY DIVING & EQPT. CO.

5725 S. Telegraph Rd. CR 8-6750
Dearborn 9, Mich. Tested Air \$1.50

NEPTUNE SPORTS STORE

4222 Woodward Ave., Detroit, Mich. TE 1-3800
\$1.00

MICHIGAN SCHOOL OF DIVING

559 East Woodland Ferndale, Michigan LI 3-4536
Air Any Time

BILL & PAUL'S SPORTHAUS

Complete Diving Shop 1528 Lake Drive, S.E.
Grand Rapids, Mich. Open MWF 'til 9 p.m.
Full air fill \$1.50

GRAND RAPIDS DIVERS SUPPLY CO.

502 Carrier, N.E. Grand Rapids 5, Michigan RI 2-2689
\$1.50

DIVER'S SUPPLY U.S.A.

525 Trimble Ave., Kalamazoo, Mich. Sales, Rentals, Mail Order Catalogs FI 3-1913
24 hr. Service 5 fills \$6

MILLER & BOERMAN

330 W. Michigan Ave., Kalamazoo, Mich. 8:30-5:30; open Wed. nites; closed Thurs. p.m.
Complete skin diving supplies-rentals \$1.50

AQUATIC & DIVING EQUIPMENT CO.

2869 Pontiac Trail Walled Lake, Michigan 9 to 9 MA 4-1417
\$1.25

J. M. SPORTING GOODS

Everything for the Skin Diver 1079 Fort St., AV 4-3212
Wyandotte, Mich. \$1.50

MINNESOTA

BRAINERD SKIN DIVING SUPPLY CO.

1302 9th Ave., N.E., Brainerd, Minn. Summer 9-6, Sun. 10:30-1
Phone 829-5953
Winter (Call ahead) 4-9 p.m. \$1.50

TRAVIS DIVING COMPANY

16809 North Scenic Lane Hopkins, Minnesota All hours; phone WEst 8-4821
\$1.50



(Continued from Page 49)

DONALDSON'S	
601 Nicollet Avenue	
Minneapolis 2, Minnesota	
Regular store hours	\$1.50
JACK THE FROGMAN CO.	
4251 Nicollett Ave., South	24 hr. service
Minneapolis 9, Minnesota	
Air filtered five times	\$1.50
PAULSON DIVERS SUPPLY	
2935 Newton Ave., N., Minneapolis 11, Minn.	
Rentals, Sales, Instruction, Repairs	JA 1-8684
Hours: 10 a.m. to 9 p.m. Daily	
MIDWEST SKIN DIVING SUPPLY COMPANY	
405 South Wabasha Street (at Concord)	
St. Paul, Minnesota	\$1.50
CA 4-7155 after hours call CA 5-0645	
ST. CLOUD SKIN DIVER CO.	
1703 3rd St. No.	
St. Cloud BL 2-1604	\$1.50
Hours: 8 a.m.-9 p.m., Sun. 9-12 noon.	

MISSOURI

MIDWEST DIVING SUPPLY COMPANY	
Wholesale & Retail	
2218 South Broadway, St. Louis 4, Mo.	PR 6-2059
Open 7 days a week	\$1.50
NEVADA	
WHAMCO DIVERS UD-10	
2009 Linden Ave., Las Vegas, Nevada	
Air Available 24 Hours	
Hours: 9-6	\$1.50

NEW HAMPSHIRE

HAMPTON BEACH DIVERS SHOP	
2 Bailey Avenue	
Hampton Beach, New Hampshire	
Rentals—Supplies—Refills	\$1.25
LAKES REGION DIVERS SUPPLY HQS.	
Weir Blvd., Laconia, New Hampshire	EN 6-4970
Immediate refills/Sales/Service/Rentals	
Instruction, 7 days a week year round	\$.150

NEW JERSEY

BOB KISLIN'S SPORTING GOODS	
Everything for the skin diver at lowest prices	
701 Main St.	Prospect 4-0900
Asbury Park, New Jersey	Refill \$1.50
KOSEFF'S, INC.	
3rd and Bay Avenues, Beach Haven, N. J.	
8 a.m. to 9 p.m. (June, July, Aug.);	
9-6 (other months)	\$1.50
GUY'S SPORT SHOP	
A complete line for skin divers—rentals	
705 Ninth Ave.	
Belmar, N. J.	MU 1-0089
ATLANTIC DIVERS	
Randall and Broadway	
Ken's Landing	
Point Pleasant Beach, New Jersey	
CHADWICK SCUBA DIVING SHOP	
Rt. #35, Chadwick Beach, N. J.	SW 3-7292
Sales, Service, Rentals, Diving Trips	Air \$1
Instr., Ocean, Bay or Lake Free	7 Days
DOVER SPORT CENTER	
Route 46, Dover, New Jersey	FO 6-3133
Six Minute Service	Fill \$95
8 a.m. to 9 p.m.	
THE BOTTOM SHOP, INC.	
State Highway 35, Keyport, N. J.	LOWell 6-0606
9 a.m. to 9 p.m.	
Sales, Service, Repairs, Rentals	
GARDEN STATE SWIMMING POOL & SUPPLY	
324 Main St., Madison	Frontier 7-4400
Rentals & Supplies	10 fills \$12.00
Hours: 8-9 M-F, Sat. 9-6 July	Single \$1.50

DIVERS LOCKER	VA 6-3875
321 Smith St.	12 fills \$10.00
Perth Amboy, N. J.	Single fill \$1.00
Hours 9-9 daily	
4 DIVERS, INC.	
56 Broadway	
Point Pleasant Beach, New Jersey	
Sales—Service—Rentals & Air	
RAMAPO GULF SERVICENTER	
289 Wanaken Ave., Pompton Lakes, N. J.	
Pure Filtered Air; Refills While You Wait	TE 5-9817
Hours: 7 a.m.-9 p.m.; Sun. 'till 3 p.m.	
UNDERWATER SPORTS OF N.J.	
A complete line for skin divers	
Hours: 10-10	
Route 17, Rochelle Park, N.J.	
ROCKAWAY SALES CO.	
Route 46, Rockaway, New Jersey	
"Air Tested 99.999% Pure"	
10 a.m. to 10 p.m.	\$1.25
BOWCRAFT SPORT SHOP	
Route 22, Scotch Plains, N.J.	
Hours: 9-9	
Twelve refills \$15, single refill \$1.50	
DIVE RITE	
1140 Ocean Ave., Sea Bright, N. J.	SE 2-2370
Skin diving equipment and supplies	
Air Station. Open 7 days	
SKIN DIVERS SUPPLY AND SALVAGE CO.	
2439 Morris Ave., Union, New Jersey	MU 7-2777
Complete sales, service, rentals and instructions	
Mon.-Sat. 10-10; Sun. 10-2	
NEW YORK	
JOHNNY K'S HOBBY CENTER	
25-22 Steinway St., Astoria, L.I.	AS 4-3610
A complete line for Skin Divers	
Open 7 days	Immediate refills \$1.00
BABYLON SPORTS CENTER	
50 East Main Street, Babylon, New York	
Everything for the Skin Diver	MO 9-2323
Free Lessons—Repairs	\$1.00
MID-ISLAND FIRE EQUIPMENT SERVICE	
11 South Grand Avenue	
Baldwin, New York	BA 3-8246
A complete line for skin divers	
COUGAR SPORTS, INC.	
3470 Webster Ave., near Gunhill Rd.	TU 1-3558
Bronx 67, New York	Repairs, Rentals, Lessons
Hours: Mon.-Fri. 1-10 p.m.; Sat. 9 a.m.-10 p.m.	
INDEPENDENT WELDING SUPPLY CORP.	
268 East 142nd St., Bronx 51, New York	
Minutes from Tri-Boro Bridge	
Scuba Filled While You Wait	\$1.00
AQUA-LAND	
244 Brighton Beach Ave.	DEwey 2-1040
Brooklyn, N.Y.	
Sales-Rentals—Repairs—Refills	
CENTRAL SKIN DIVING—BROOKLYN & QUEENS	
1007 Utica Ave., Brooklyn, N.Y.	DI 5-1070
160-09 Jamaica Ave., Jamaica, N. Y.	\$5.50
RE 9-5772	
One Free Lesson—Heated Indoor Pool—Try B 4 U Buy	
HARVEY'S SPORTING GOODS, INC.	
2003 Emmons Ave.	10 refills for \$5.00
Brooklyn 35, N.Y.	Sheepshead 3-0054
Open 7 days a week—Immediate refills	
COLLEGE MARINE & DIVING CENTER, INC.	
18-51 122nd St., College Pt. 56, N. Y.	
FL 9-9123—Refills while you wait	
Diving Equipment Sales-Service-Repairs	
B & B SPORTING GOODS CO., INC.	
162-02 Northern Blvd. IN 1-5461	
Flushing 58, N.Y.	
Mon.-Thurs. 8 p.m.; Fri. 9 p.m.; Sat. 7 p.m.	\$1.00
SPORT WORLD	
138-10 Northern Blvd., Flushing, N. Y.	FL 3-1803
"North Shore's largest Skin Diving Center."	
Refill while you wait	\$1.00
DANZIGER	
70 So. Main St.	
Freeport, L. I., N. Y.	FR 8-4480
Equipment sales and refills	
HEMPSTEAD OUTDOOR STORE	
5 North Franklin Street	
Hempstead, L. I., N. Y.	Filled while you wait
IV 6-9851	10 fills for \$10.00
BRAD'S AQUA SPORTS CENTER	
Route 9, Lake George, N. Y.	NN 8-2638
Professional Diving Center	C-B 2A5319
Air—Sales—Rentals—Instructions	
DAVY JONES' LOCKER	
Mayard Ctr., Lake George, N. Y.	NN 8-2052
Finest Diving in the East	
Area's Largest Skin Diving Center	
ROBINHOOD SURPLUS CENTER, INC.	
2132 Sunrise Highway	FR 8-4206
Merrick, New York—Filled While You Wait	
Certified Pure Air—Open Every Evening	

UNDERWATER DIVING TECHNICIANS	
Air Station—3133 Benjamin Rd.	RO 4-3429
Equipment Sales—196 Amos Ave.	RO 4-8374
Oceanside, L. I., New York	\$1.00
MAC SNYDER'S ARMY & NAVY STORE	
136 Surf Ave., Port Jefferson, L. I., N. Y.	PO 8-1592
Rentals—Instruction	
Open Sunday June thru Sept.	
BOB & LEE'S HOBBY & SKIN DIVING CENTER	
111-05 Lefferts Blvd., Richmond Hill 20, N. Y.	
Everything for the diver, sales, service,	
rentals	phone Virginia 8-4321
NAUM BROTHERS SPORTING GOODS	
Marine—Skin Diving—Authorized Repairs	
2373 Ridge Rd., W. Rochester	
Hours: Daily 8-9, Sat. 8-6	\$1.50
NORTH CAROLINA	
NATIONAL WELDERS SUPPLY CO.	
Tanks Filled; Aqua-Lung Supplies	
Charlotte—Asheville—Salisbury—	
Fayetteville, North Carolina	
OHIO	
ACE AIR COMPRESSOR CO.	
1647 Eddy Road	Shop GL 1-3011
Cleveland, Ohio	Nights RE 1-6014
Refills—Sales—Instructions	
ELYRIA DIVERS SUPPLY	
336 Prospect St.	Phone FA 2-3158
Elyria, Ohio	Air \$1.50
Sales, Rentals, Refills	
OKLAHOMA	
PURDY'S SPORT SHOP	
123 North Muskogee Avenue	GL 6-3341
Tahlequah, Oklahoma	\$1.50
Hours: 7-6; Sat. 'till 9	
OREGON	
EUGENE SKIN DIVERS SUPPLY	
Air Station—Rentals—Instruction	DI 5-1524
Only Specialty Dive Shop in Central Oregon	
6th and Blair, Eugene, Oregon	\$1.25
AMERMAN'S DIVERS SUPPLY	
7312 S.E. 82nd St.	
Portland 6, Oregon	
Everything for the Skin Diver	\$1.00
PENNSYLVANIA	
ADVANCED AQUA DIVERS	
Division of Advanced Fire Eapt. Co. Inc.	
Rt. 30 West, Greensburg, Pa.	
Phone TEMple 4-6550	
POLLY BROS.	
7th & Market Sts.	
Philadelphia 6, Pa.	
Telephone Walnut 2-6565	\$1.50
WEST'S SPORTING GOODS	
450 Penn Avenue	FR 5-5250
West Reading, Penna.	
A complete line for skin divers	\$1.50
SOUTH CAROLINA	
NATIONAL WELDERS SUPPLY CO.	
Tanks Filled; Aquad-Lung Supplies	
Charleston—Florence—Columbia—	
Greenville, South Carolina	
TENNESSEE	
MID-SOUTH MEDICAL GASES, INC.	
651 Jefferson Ave., Memphis, Tenn.	
8-5; Sat. 'till Noon	
Voit Distributor	5 minute refills \$1.50
TEXAS	
AQUALAND	
1626 N. Industrial Blvd.	
Dallas 7, Texas	
Refills, sales, rental, instructions	RI 8-2812
DALLAS-MAYER COMPANY	
2719 Live Oak Street	TA 3-5046
Dallas 4, Texas	TA 7-6361
Sales, Service, Rental, Air	
NATIONAL WELDING SUPPLY COMPANY	
Downtown, 5 blks. W. of Courthouse	
615 W. Belknap, Fort Worth	
Year-round Refills, Sales, Service	ED 6-7145

SKIN DIVER—October 1961

VIRGINIA

MARITIME EXPLORATIONS

"Virginia's FIRST Underwater Sports & Skin Diving Center"—Sales, Rentals, Service, Instructions
1901 Atlantic Ave., Virginia Beach, Va. \$1.50

WASHINGTON

DIVERS HUT

5120 Kitsap Way, Bremerton, Wash.
(on Silverdale Highway) ES 7-6991
Open 7 days Air \$1.25

PUGET SOUND DIVERS, INC.

2520 Westlake No. Seattle 9
Sales & Rentals AT 3-8555
Hours: 8:30-5:30 Emergency: PR 6-4428 \$1.25

SPORTS CREEL, INC.

1231 E. Sprague WA 4-2330
Opportunity (Suburban Spokane) \$1.25
Hours 9-6, Fri. till 9, Sun. 8-9 a.m.

OSBORN & ULLAND

1123 2nd Ave., Seattle, Wash.
Hours: 9:30 Mon. & Fri. till 9 p.m. \$1.25

WISCONSIN

BROOKFIELD SKIN DIVING SUPPLY, SCHOOL

310 No. Moorland Rd. (City O), Brookfield, Wis.
Hours: Mon.-Sat. 9-9; Sun. 12-5
Instruction—Equipment—Rentals Air \$2.00

FREDERIC DIVING SHOP

Frederic, Wisconsin 327-8306
Complete Line of Diving Equipment
Instructions, Rentals, Compressed Air \$1.75

SKIN DIVERS SALES & SERVICE

929 S. Park St., Madison AL 6-0451
Hours: 7 a.m.-8 p.m. 7 days a week
Air, Rentals, Instruction, Repairs \$2.00

SPORT DIVER CORP.

3810 W. Lisbon Ave., Milwaukee 8, Wis.
Hours: Mon., Wed., Fri. 9-9
Tues., Thurs., Sat., 9-6 \$1.95

RACINE AQUA-LAND

Hwy 38 and county MM, Racine, Wisconsin
Midwest's Best Skin Diving ME 4-9587
Crystal Clear Water—Insured Pure Air

SKIN DIVER'S EQUIPMENT CENTER

1517 Belknap St., Superior, Wis.
Lake Superior Excursions
Sales—Rentals—Salvage Experts Air \$1.50

CANADA

LLOYD SHALES HOBBY SUPPLIES

208 Division St.
Kingston, Ontario LI 8-8427
Equipment Sales—Instruction—Demonstration

WESTON AQUATICS & SPORTS

1758 Weston Road
Weston, Ont.
Equipment and Rentals CH 1-9139

ISLAND DIVERS, LTD.

315A Wesley St., Nanaimo, B.C.
Phone: SK 4-8561; evens. SK 4-8517
Equipment—Rentals—Instruction \$1.25

DATE DIVING EQUIPMENT LIMITED

Canada's Best-Known Specialist-Distributors
Established 1853. Sports, Commercial, Naval
Office & Showroom, 383-5 Concord, Montreal

MEXICO

DIVERS OF MEXICO, S.A.

Costera Miguel Aleman 98-4
Acapulco, Gro., Mexico
Instructions, Sales, Rentals, Repairs & Air \$1.50

DEPORTES MARITIMOS

Dick Adcock
Hotel Perla, La Paz, B.C., Mexico
Boats, Tanks, Refills, Rentals

PUERTO RICO

LOS TRES CABALLEROS DEL MAR

Box 491, Puerto Real
On Bahia de Yegua, Las Croabas
Instr.—Charter-Air-Sales-Service

THE ORIGINAL DON'S AQUATIC CENTER

Sales—Repairs—Rentals—Tanks Filled
Box 10481 Caparra Heights Tel. 8-0072
Military Highway, No. 2 Entrance Puerto Nuevo

SKIN DIVER—October 1961

YOU CAN BUY A QUALITY $\frac{1}{4}$ " WET SUIT FOR THE PRICE OF A KIT!

$\frac{1}{4}$ " WET SUITS

COMPLETELY ASSEMBLED WITH
HOOD, JACKET, TROUSERS AND
BOOTS . . . PREPAID TO
YOUR DOOR . . .

Only **34.95**

3/16" WET SUITS . . . \$32.95
1/4" WET SUIT KITS . . . 29.50
3/16" WET SUIT KITS . . . 26.50

Satisfaction Guaranteed
or Your Money Back!
Enclose 10¢ for
complete diving catalog

CHECK THESE QUALITY FEATURES!

- First quality 400% stretch Neoprene, skin 2 sides.
- 6 years' suit manufacturing experience.
- Talon zippers and non-corrosive reinforced snaps.
- Yellow safety stripe in hood, specify if desired.
- Extra high trousers. • Double stitched zippers.
- Add \$3.00 for custom fit (send for chart).
- Women's trousers have zipper at waist.
- Black and yellow jackets only \$2.50 additional.

SEND MEASUREMENTS: Neck, chest, waist, bicep, wrist, hips, thigh, ankle, underarm to wrist, crotch to ankle. Include weight, height, shoe size, hat size.

DEALER INQUIRIES INVITED

Send Cash, Check or Money Order
(Washington Residents Add 4% Sales Tax) to:

AQUA EXPLORATIONS

P. O. Box 3181

International Station

Seattle 14, Washington

*When you're ready
for the best*

CHOOSE SEAHAWK
Send 50¢ for catalog &
underwater colorslide
Seahawk Products

P. O. Box 1157 Coral Gables 34, Florida



WEIGHT MOLDS

2-piece aluminum molds
make 2 lb., 3 lb., 4 lb.,
and 5 lb. weights in popular
form-fitting design.
\$10.00 each (specify size
desired). Send check or
money order to:

EBBTIDE ENTERPRISES
306 N. MORRIS
WEST COVINA, CALIF.

KLONDIKE KING

JET PROPELLED
PRACTICALLY UNSINKABLE
ALMOST INDESTRUCTIBLE
JETS YOU THERE, THEN WORKS THE GOLD SUCKER

**COMBINATION GOLD DREDGE AND GOLD DIVING BOAT
GOES UP STREAM LIKE A SALMON, ALLOWING YOU
TO GET TO THOSE "SPOTS" WHERE OTHERS CAN'T GO!
RIDE INSTEAD OF BEING A PACK MULE!**

BOAT AND SUCKER ARE OF TOUGH, RESILIENT
FIBERGLASS. THE BOAT AND SUCKER WEIGHS
JUST 170 POUNDS COMPLETE AS YOU SEE IT.
READY TO WORK—JUST HOOK UP YOUR 2 1/2"
HOSE WITH OUR SUPPLIED QUICK COUPLERS
AND OUR EFFICIENT 7" SUCKER GOES TO
WORK FOR YOU.

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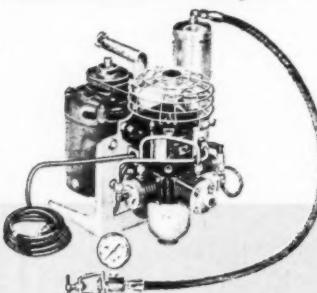
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**New Museum Exhibit
Features Skin Diving**

The photograph shows a new exhibit opened in the Milwaukee Public Museum, which is believed to be the first exhibit in a museum showing the operations of skin diving in connection with underwater research for anthropological specimens and data. The exhibit represents the results of a recent expedition to Guatemala.



**Skin Divers Find
Slot Machines**

A graveyard for slot machines, apparently stolen and dumped into a private quarry hole near Toledo, Ohio, was discovered by a group of skin divers from Columbus. George Smallsreed Jr., Columbus Dispatch photographer, snaps diver Nick Brinza as he finds one of a dozen slot machines in 50 feet of water. Discovery was made during a training session of the Sea Nags, a Columbus YMCA skin diving class. Brinza said the group examined the slot machines, found that the coin boxes had been removed from all of them. How they got there is a mystery. (Dispatch Photo) ▶

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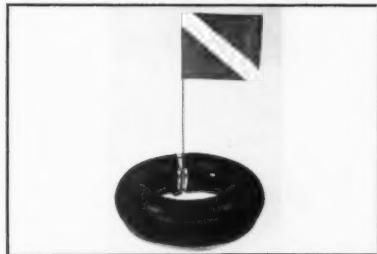
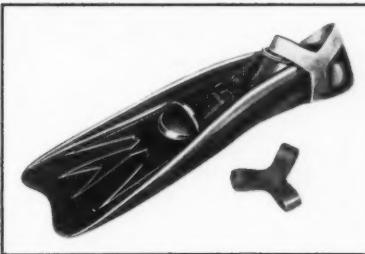
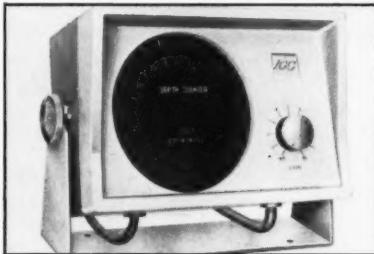
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COMPETITION FIN — Designed for maximum comfort, propulsion and durability is now equipped with the Fixe-Palme universal strap for absolute fin security under the most turbulent conditions. The Competition fin is made of a combination of rubber textures for the foot comfort and rigidity desired by the experienced diver and comes in sizes 9-11, 11-13, and 13-16. A product of Healthways, 3669 Seventh Ave., Los Angeles, Calif.

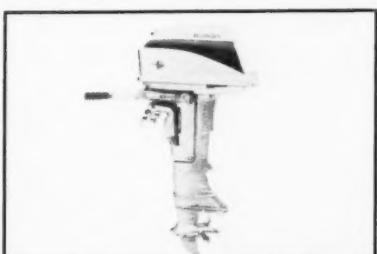
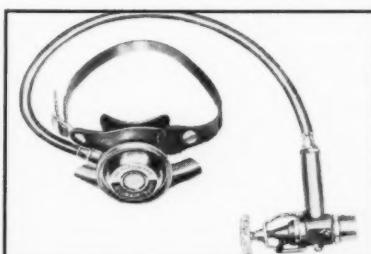
DE WAN DIVERS' FLOAT BRACKET — With flag, fits all auto inner tubes. All-aluminum flagstaff carries regulation 12" x 15" Divers Flag. Flag remains unfurled at all times; unique design permits flag to swivel 360° without wrapping around flagstaff. Staff is adjustable and can be installed or removed in just a few seconds, comes complete with bracket, flagstaff, and flag for \$5.95 postpaid from DeWan Mfg. Co., Box 2606, Milwaukee 14, Wis.



MY-TE IV OUTBOARD — New lightweight motor selling for \$99.50 is offered by City Engineering Co., Inc., 3547 Massachusetts Ave., Indianapolis 18, Indiana. The motor develops approximately the same power as a regular 4 hp motor, and is designed to provide variable speeds from a snail's pace up to 14 mph. A full 360° swivel permits instant changes in any direction. Write to the manufacturer for complete details.

GUARD-JET — Completely encircles the outboard motor propeller, providing protection against injury from the propeller, and also concentrates the jet stream attaches to the cavitation plate of any outboard motor with four bolts. Static tests show increases in effective pull of up to 50% when Guard-Jet is installed. Full details and literature are available from Fleet Products, P. O. Box 1188, Newport Beach, Calif.

NEW BLUE 50-FATHOM by Voit is a compensated regulator for easiest breathing at all depths with two hoses for maximum comfort and safety. There are fewer working parts, and they are all rust-free for ease of maintenance. The housing of new Cyclocac plastic is unbreakable, chip proof and lightweight. Pearl gray mouthpiece and hoses complete the fittings. Retails for \$60. Write: Voit Rubber Co., 2945 East 12th, Los Angeles 23, Calif.



PLASTIC-GLASS AQUARIUM — New on the market and unlike metal-framed counterparts, it's built to accommodate both fresh and salt water. Made of the same plastic material telephones are made of, frame won't corrode or set up electrolytic currents, can be produced in several colors. For additional information on this entirely new idea in aquariums, write: Oscar Enterprises, Inc., 1216 Fifth Avenue, Berkeley, California.

SCUBAIR "300" REGULAR — With clearly sonic audible alarm to alert the diver when the air in the tank has been depleted to the safe reserve level of 300 psi. The alarming device continues to operate until all the air has been exhausted, reminding the diver that he is breathing reserve air. More details on this important advance in scuba regulators is available from Healthways, 3669 Seventh Ave., Los Angeles, Calif.

BOATING DIVERS — Are discovering Bundy Marine's 500cc outboard motor, which will produce speeds of 29-30 mph on stock, 14 to 16-foot run-abouts. Fuel consumption at top speed is 3 gallons per hour, according to records maintained during several marathon races in which the Bundy 500 has been a winner. The new Bundy 300cc is said to offer equally superior performance in its class. Details from Jacqua, 101 Garden, Grand Rapids, Mich.

ISRAEL UNDERWATER

(Continued from Page 35)

devised his own protective cover for his camera. The total cost involved was fifty dollars. Armed with his camera in its homemade waterproof case, a pair of good lungs and his photographer's instinct, he has obtained sensational results. He first "caught the bug" of underwater photography when he heard that a French expedition was filming the silent world at Eilat; he rushed down to see whether he could match results with the experts. They laughed merrily at his contraption but ended up buying his pictures.

He uses an ordinary Rolleiflex camera. The cover is made from a rubber tire tube into which three windows have been built for the viewfinder and lens. The cover is closed with two brass bars and is then pumped full of air by means of a bicycle valve. (Brass was used, of course, because it does not corrode, and special optical glass was necessary for the windows).

Using this balloon-like, air-filled cover has three advantages. If the photographer drops his camera underwater, it rises to the surface and is easily found; if there are leaks, bubbles betray the weakness; finally, the air protects the camera from being triggered by water-pressure.

The photographer triggers the camera through the air cushion by feeling with his fingers. The light varies according to the depth, the reflection from the bed of the sea and the amount of plankton in the water. (The Red Sea derives its name from the plankton). Werner Braun relies entirely on his own experience to gauge the

amount of light necessary. Generally, he finds that at a depth of ten feet, with sunlight coming through from above and reflected from below, he obtains perfect results with an exposure of 1/100 and an aperture of 8. (He only uses very sensitive, high-speed film.) In color, he uses an exposure of 1/50 and an aperture of 5.6.

In his experience he cannot obtain good results in color at a depth of more than ten feet as at greater depths the water acts as a strong filter and keeps out all colors except blue. He has taken some perfect pictures in black and white at 23 feet below the surface, using an exposure of 1/100 and an aperture of 5.6. If he is working on the bottom of the sea itself, he has managed to obtain black and white pictures at a depth of 27 feet with natural light.

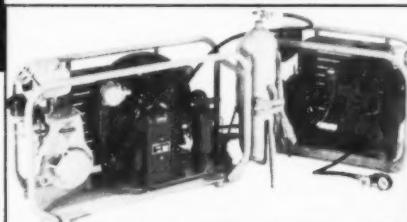
Braun is only a moderate swimmer but a good non-competitive diver. He uses a mask, snorkel and fins, and all his pictures have been taken without the aid of a lung. He uses a lead belt carrying four to seven pounds to keep himself underwater, but nevertheless finds that he cannot stand still in the water and has to rely on split-second judgment as to when to trigger the camera. He mentions that one of the advantages of underwater photography is that the water acts like a telephoto lens enlarging everything, and thus aids but complicates photography.

Many enthusiasts will have elaborate modern equipment and will not need to rely on Werner Braun's unpatented ideas. But, whether richly or lightly equipped, every man or woman who has ever triggered a camera should plunge into the cool waters of the Red Sea to add a new dimension to his hobby or profession. One can imagine the envy of the neighbors back home when he produces beautiful shots of rare and exquisite fish! □



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MEDICINE UNDER PRESSURE

By Walter R. Kirker, M.D.

EARLIER THIS YEAR, in my discussion concerning ascent, I regrettably misquoted Dr. Ed. Lanphier as to his current views concerning this diving problem. Ed has contacted me and now I would like to give Dr. Lanphier's correct views on the subject.

1. Be prepared
 - a. Unless you are using a very buoyant suit, wear a reliable flotation device on every dive.
 - b. Make sure you always have a boat or at least a float to come up to.
 - c. Keep in constant contact with your buddy so he will know at once if you run into trouble.
2. If it is obvious that you can't breathe and can't do anything

about it, don't waste time before starting up.

3. Leave your scuba on unless it is very negatively buoyant or entangled, (plenty of time to get it off when you get to the surface.)
4. Start swimming up.
5. *Exhale* immediately. Continue exhaling all the way up. (Expansion of residual lung air will continuously provide you with more to exhale.)
6. Promptly check for obstructions and sources of entanglement overhead.
7. If there are no obstacles overhead, drop your weights and inflate your life jacket as soon as possible. (If you are under something, try to get in the clear; then drop weights and inflate preserver.)
8. During ascent, hold your hands over your head and keep looking up, ready to fend off any obstacles.
9. Slack off your swimming as soon as your buoyance "takes over."
10. When on the surface tread water and take off your scuba if it tends to hold you under. (A snorkel comes in handy here.)

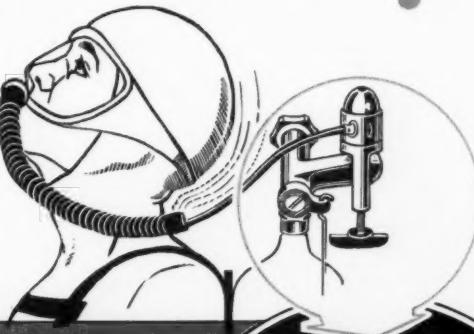
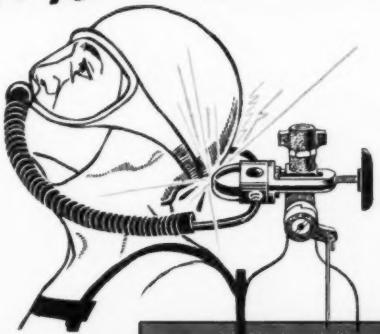
A special note: It is felt that emer-

gency ascents are too risky to practice from anything greater than pool depth unless a recompression chamber is at hand.

The above notes are extracted from the Instructors Notes in Medical Facts of Diving, by Dr. E. H. Lanphier and R. A. Morin, Chief Hospital Corpsman, USNR. These notes in conjunction with a set of 30 slides may be purchased from Association Press, 291 Broadway, N. Y., N. Y. for \$25.00. I would recommend such a purchase for a club who periodically instructs new divers.



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PREHISTORIC ARTIFACTS

(Continued from Page 15)



FIGURE 6

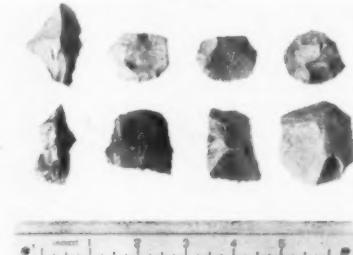


FIGURE 7

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position of recovery and note any other conditions that may be pertinent to the item found. Only by exchanging this information with interested archaeologists through letters and photographs will real value be realized and our enjoyment of underwater exploration be totally rewarding.



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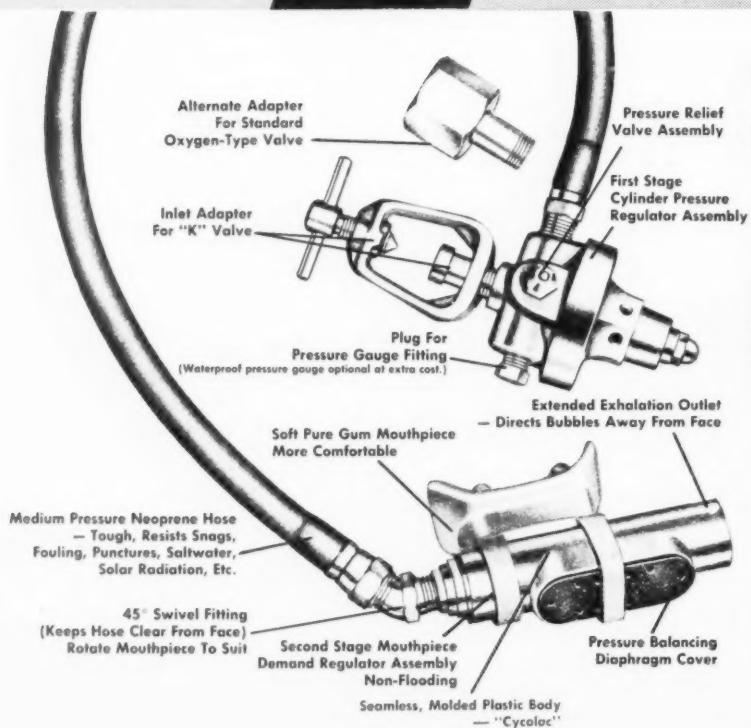
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SKIN DIVER—October 1961

SILVER BAR WRECK

(Continued from Page 13)

was a thin stream of air bubbles squirting out between the planks. It was Lon. His legs were protruding from under the collapsed deck which completely covered the upper half of his body.

Johnson and I tried to lift the wreckage and pull Lon to freedom but it was no use. Lon was held tight. Jim motioned some signals that indicated he wanted the Mela II's anchor to be hooked under the section of deck that imprisoned Lon. We put the flukes of our Danforth under a cross beam which lay right over Lon's legs. Then Johnson signalled again. I was to stay below with Lon while he went topside.

On deck, Johnson had the anchor chain brought around to the starboard side, he then told Howell to get all the sails raised. A ten knot wind was blowing off shore and when the stiff breeze hit the sheets of the Mela II, the old schooner heeled sharply to port, raising her starboard side high out of the water and lifting the anchor chain up with it. Down below the Danforth strained at the heavy deck. It chattered for a moment, the wood squeaked and groaned but finally . . . it gave Lon back to us.

In that instant when the heavy deck was raised high, I grabbed Lon's legs and pulled him free. His tank was on reserve and I could see Lon breathing hard. I yanked his mouthpiece from his lips and shoved my own into his mouth. The two of us slowly swam to the surface, breathing on one tank.

When we were all safely aboard on the two boats and it was ascertained that Lon, although pretty badly shaken up, was none the worse for his little adventure, Howell called across to me, "I think we best move out, we had enough today."

I agreed. "OK," I said, "shove off."

Reluctantly we hoisted our anchors and sailed for New Haven. There with a dry roof over our heads and solid ground under our feet and a glass of cold beer in our hands we made our pact to return. Return to clean out the silver bar wreck. ➤



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HAWAIIAN VENTURE

(Continued from Page 26)

close is enough to produce a heart attack.

We returned to the puka for a look at the fish from a comfortable distance. The shrimp were busy cleaning one of the lion fish, while the other waited its turn. What beautiful and deadly creatures they were.

Our air soon ran low, so Patty and I returned to the beach. We joined Pat and Jeanine to help clean the fish. The kumu and menpachi have to be scaled and gutted, but the Aweoweo need not be scaled (another feature I like in that fish). Vertical cuts are made in the sides of the fish, then they are barbecued with the head still attached. The fish are basted with a mixture of soy sauce, water, ginger, garlic, chili pepper, mustard and sugar. After cooking, the fish are simmered in the sauce for a few minutes, then served usually with rice.

Buzzy Trent dropped by for an after dinner drink to tell of his day's diving. He and Neal Tobin had been to the "super market" puka as he calls it.

"While Tobin went in through the front door, I slipped in the service entrance. It was just like being in the back room of a super market. Let's see now, do I want Aweoweo, menpachi, or kumu? It was loaded with everything. I took my choice and nailed a big menpachi. Everything was great. We took turns getting in the service entrance until the 'manager' got wise. The manager is a big, black eel with a mouthful of teeth like this . . ." Buzzy held up his hands showing the size of the mouth. "He was excited, running back and forth yelling, 'Who's going to pay for this? Somebody's got to pay for this!' We were robbing his super market and there would be no more of this."

Buzzy threw up his arms, sipped his drink and continued:

"I'll get that eel if it's the last thing I do! I'll get a cannon that'll take care of that manager! You watch me nail him! He'll be hanging on my stringer when I go out there again!"

"What stringer?" spoke up Tobin.

"Oh, yeah. I guess I better tell you guys about the 'Jacks' (sharks are called Jacks here) Tobin and I ran into today," said Buzzy. "We had a good stringer of fish when the manager got upset, so we started off for the beach. I had the tow line sinker from the floater in a pocket on my trunks when he hit. I use a piece of stainless wire on my floater for a stringer. The Jack couldn't bite through the wire and the stringer must have hooked up in his mouth when he made a pass on the fish. One moment I was swimming along and the next thing I knew something was pulling me backwards through the water at 20 miles an hour. I turned around to see what had the floater and saw this big Jack; then the pull through the water filled my mask. I couldn't get the floater line loose from my trunks, and he kept pulling me under. Finally I grabbed the line and pulled with everything I had, ripping my trunks half off but the line came free! Tobin swam over to see if I was OK, then we got out of there! An old Hawaiian guy on the beach said the shark had been following us for about ten minutes. You know what happened? That damned manager called the cops that's what! It's all his fault."

I told my story about the lion fish, then the conversation drifted along to surfing.

Trade winds rustle through the tall palms. A tropical moon turns on and off through the clouds. Off in the distance a small wave breaks against the reef and dissolves into the sand. Somewhere out there swim the fish, the shark, the whale, and tomorrow I too will swim with them. ■

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NEWS CURRENT

(Continued from Page 46)

COLUMBUS, OHIO—The Columbus YMCA Sea Nags aided the U. S. Navy in conducting "operation frogman" in the Scioto River. The demonstration by the club and the Navy, was to familiarize the residents of central Ohio with diving as a sport and underwater demolition team operations.

AUSTIN, TEXAS—Members of the local Civil Defense Rescue and Recovery Team, lead by Jim Canady, searched for the body of a man who had leaped over seventy feet to his death from atop Mansfield dam. The search was conducted over the trash racks and the intake system to a depth of one hundred and seventy feet. Divers assisting included Steve Brown, Jack Burkett, Bob Johnson and Jim Joiner.

SAN RAFAEL, CALIFORNIA—Al Giddings and LeRoy French of the Marin Skin Divers have opened a diving shop, complete with pool, at 3765 Redwood Hwy. N., San Rafael, called the Bamboo Reef. Featuring their own custom made lights, housings and guns, they also have complete lines of diving equipment displayed in the exotic atmosphere of their new store.

WELLINGTON, NEW ZEALAND—Twenty-eight applications to salvage a reputed £1,000,000 (\$2,800,000) worth of gold in the near century old wreck of the clipper ship *General Grant* at the Auckland Islands, 290 miles south of New Zealand, have been refused by the Government Lands and Survey Department which administers the area. And it is unlikely that any more licenses to salvage the gold will be issued because of the dangers involved in getting to the wreck. Nine known expeditions have tried to retrieve the vessel's cargo of gold, but all have failed and in many cases lives have been lost. The clipper's manifest showed its cargo included 2,470 ounces of gold and more than nine tons of zinc which was believed to comprise more than 46 per cent gold. The vessel which was bound for London from Victoria, Australia, is supposed to have sailed into a cave at the base of several hundred feet of sheer rock cliffs.

LONG BEACH, CALIFORNIA—Diver Jack N. Lindsey triumphantly surfaced with what he thought was an ancient cannon ball only to discover his find was an old bowling ball . . .

GILLAN COVE, ENGLAND—An invasion of England by fifty whales was repulsed by holiday visitors and villagers in a day-long battle on the beaches around the tiny Cornish cove. The whales were believed to have sought refuge from marauding killer sharks.

HYANNIS PORT, MASSACHUSETTS—Our country's first lady, Mrs. Jacqueline Kennedy, has purchased a diver's wet suit jacket for use here. Divers Den where she purchased the jacket reports she'll be using it for both diving and water skiing.

NEW JERSEY—A team of shark experts warned swimmers and resort owners not to rely on a much-publicized "bubble fence" for protection against shark attacks. A series of controlled tests conducted by a panel of scientists have shown that the "bubble fence" doesn't seem to even bother some of the sharks. Results of the tests were announced by the American Institute of Biological Sciences,

the Office of Naval Research, the American Museum of Natural History and Cornell University. During the first test conducted by Dr. Perry W. Gilbert of Cornell ten sharks passed through the "bubble fence" seemingly undisturbed and two appeared to be turned back.

WINNIPEG, CANADA—Moe Bland and Gil Lamothe have recently opened the first exclusive divers shop in Winnipeg. Their shop, the Divers Den, is fully equipped to handle all divers needs. The two shop owners have been instrumental in helping form a number of clubs in the area.

ASHTABULA, OHIO—Four divers have discovered a vessel believed to be the *James F. Joy* which sank during a storm on October 23, 1887. The divers making the discovery in Lake Erie, northeast of the Ashtabula harbor entrance, were Richard Reublin, Kerry Lehtinen, John Thomas and Ray Macaro. The four divers, in a letter to SDM, related "while reading the August issue of SDM we noticed the similarity between the story of the two wrecks at Takanassee and the luck which recently befall us. While diving near the harbor at Ashtabula we came across the wreck of a schooner. A few days later we went out to area and descended on the wreck. You can imagine our surprise when we landed on the remains of a second schooner. The two were no more than 74 feet apart. We think that this was the *Joy* and the other (the first) is a barge that sunk circa 1918. If any of your readers know what the cargo of the *James F. Joy* was perhaps they could help us make a positive identification.

MILOS, AEGEAN SEA—An American, Manthos Kyritsis, who made a vow years ago to try to find the arms of the *Venus de Milo* is now back on his native island of Milos looking for them.

CHICAGO, ILLINOIS—A buoy crammed with scientific instruments will be tested in Lake Michigan this month by the United States public health service in an effort to find ways of solving the water pollution problem. If the test is successful, thirty of the buoys will be put into Lake Michigan next March to survey 8600 miles of the lake south of a line running from Milwaukee to Michigan City. The buoys will last indefinitely and can be used for future surveys even in the ocean.

SAN DIEGO, CALIFORNIA—A Los Angeles firm has been recommended to build a \$2 million oceanarium south of Perez Cove in Mission Bay Park. The aquatic facility will be constructed on 15 acres and will feature a series of tanks open to the public. A skin dive equipped with underwater microphone will explain marine life to spectators and feed the fish. Technical advisors are Dr. Kenneth S. Norris, former curator of Marineland of the Pacific, Carl Hubbs of Scripps and the Natural History Museum in Balboa Park, and William N. MacFarland, former assistant curator of Marineland.

SAN FRANCISCO, CALIFORNIA—Two rival treasure hunters are racing to reach the legendary *Rio De Janeiro* which sank in the Golden Gate area 60 years ago. They are Alfred Mikalow and William A. Pomeroy. Both divers are sure they have located the wreckage, but in different places. The Pacific mail ship was a 344 foot steel steam and sailing barkentine built in Philadelphia in 1878 and was said to carry from two to eleven million dollars in treasure. Mikalow has a 1500 pound

diving robot—which takes a man about half an hour to get into for deep sea work. The robot is eight feet tall, with steel claw hands, each capable of exerting 10 tons of pressure. Atop the robot's head is a powerful searchlight.

SCHEECTADY, NEW YORK—Members of the Schenectady YMCA Skin Diving Club decided that their annual dive this year should be to clean up beer cans from the bottom of Paradise Bay on Lake George. Gene Parker retrieved 131 cans and bottles to win the overall prize. Robert Drose and Len Jones were other prize winners in the club's "treasure hunt."

BOSTON, MASSACHUSETTS—A cash register stolen from an Ashly business was recovered from Stodge Meadow Pond by diver George Neil of the Boston Police Department.

VANDENBERG AIR FORCE BASE, CALIFORNIA—Skin divers parachuted into the ocean to successfully recover a capsule from the *Discoverer XXV* satellite which had been in orbit two days. The divers hauled the capsule, loaded with instruments and samples of both common and rare metals, aboard a liferaft. An amphibious plane picked up the divers and the capsule.

MIAMI, FLORIDA—Divers are being used in laying prestressed concrete pipe on a \$223,000 sanitary sewer job under contract to the City of Miami. More than 3700 feet of 42 inch line is being put into the project. One of the divers, Curtis Shirley, said he could not see under the water and that he and the other divers worked by feel.

Water Safety Stressed in "Guide To Successful Boat Handling"

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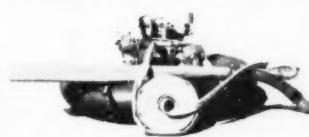
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Extensive inquiries by the Quebec Department of Fisheries and Game throughout North America revealed that 23 per cent of the states and provinces have a total ban on underwater spearfishing. According to an item in *Journal De Bord*, from the Office of Biology, Montreal University, May 23, 1961, 31 per cent allow spearfishing for non-sport, coarse fish, 16 per cent allow it for non-sport fishes on certain waters, and 30 per cent have no regulations. ➤

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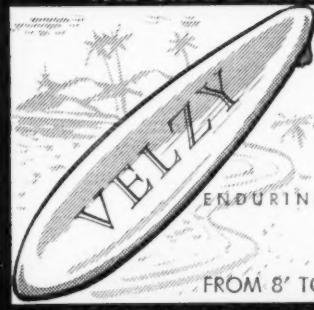
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By

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The book is done in picture and caption form with almost 140 illustrations and clear, concise text. The material was taken from actual motion picture films directed by the five experts. The six sections of the book cover Skin Diving and Scuba (history), Basic Skin Diving (in two parts), and Skin Diving with Scuba (in three parts).

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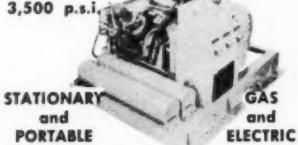
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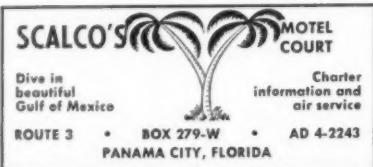
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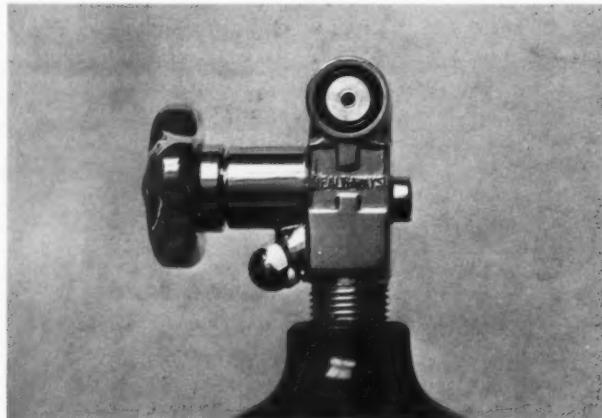
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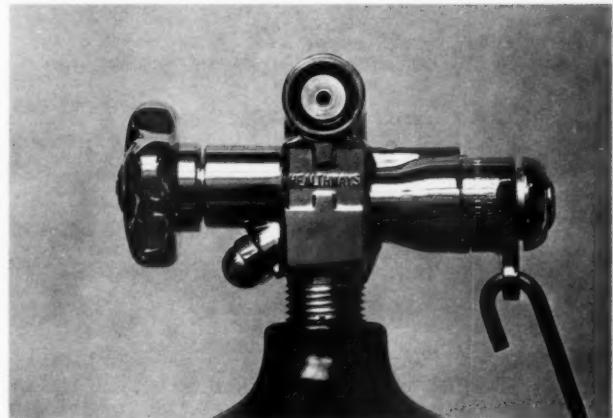
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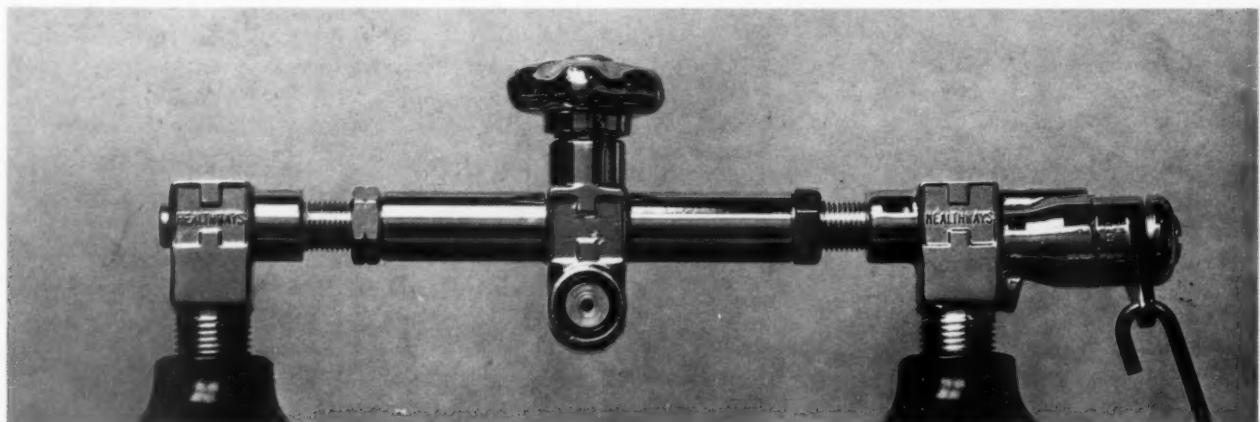
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